...IAL SCIENCES

National Safety News

AUGUST 1950

AUG - 4 1950
DESTROY

SAFE, EFFECTIVE

LIGHT by Edison

—serving individual needs in many industrial jobs

PORTABLE
DEPENDABLE

ELECTRIC CAP LAMPS

- LONG SERVICE PERIOD
- ECONOMICAL
- EXPLOSIONPROOF CONSTRUCTION
- BOTH HANDS FREE
- DEPENDABLE EDISON BATTERY
- YEARS OF USEFUL LIFE
- U. S. BUREAU OF MINES APPROVED

TYPICAL INDUSTRIAL APPLICATIONS

Chemical Plants
Fire Departments
Refineries
Distilleries
Mushroom Growing
Breweries
Railroads
Grain Elevators
Service Stations
Lubrication Racks
—and many others

MSA
SAFETY EQUIPMENT HEADQUARTERS

Providing continuous, high-level illumination for more than 10 consec tive hours per charge, the EDISON Electric Cap Lamp—long famous coal and metal mining service—is employed increasingly in indust wherever portability, long burning time, great operating economy, an the free use of both hands are important advantages.

Powered by the exclusive Edison nickel-iron-alkaline battery *that do not destroy itself in order to function,* and with lightweight headpie producing a brilliant "spot" or wide-angled spread of light, this remar able cap lamp is rechargeable with an inexpensive charger, operati on 110-volt A.C., and has a useful life measured in years. Its high-quali construction assures dependable performance under the most arduo operating conditions.

More than 600,000 Edison Electric Cap Lamps are in daily servi throughout the world. Hand or floodlight models are also availabl Let us consult on *your* prospective applications, and arrange an actu demonstration.

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS AND MEADE STREETS · PITTSBURGH 8, PA.

At Your Service:

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

Style No. 780
For Metal Fumes, Mists, All Dusts
BM 2149

The Complete Line of Respirators

WILLSON

Protection With Comfort

Here is the most complete line of Bureau of Mines approved respiratory protective equipment. It includes filter and cartridge type respirators which are effective against all dusts, mists, fumes and low concentrations of organic vapors. Ease of breathing and comfortable fit assure a low fatigue factor. Choose exactly what you need from selector tables in our new catalog. Get a copy from your nearest WILLSON distributor or write direct to WILLSON PRODUCTS, INC., 205 Washington St., Reading, Pa.

Style No. 731
Chemical Cartridge For Organic Gases and Vapors—BM 2303

Style No. 45D
For All Dusts
BM 2152

Style No. 5D
For All Dusts
BM 2152

Style No. 750D
For Mists and All Dusts
BM 2151

WILLSON®
Dependable Products Since 1870

For your convenience, Willson distributors in 61 cities are listed on page 98.

NATIONAL SAFETY NEWS

Published monthly by the National Safety Council

AUGUST, 1950 Vol. 62, No. 2

THE COVER: *In the balcony of the hot strip mill speed operators control the speed of travel of the strip of hot metal through the rolls. If the speed of separate stands is not coordinated, narrowing would result from stretching or a loop might develop and damage product and equipment, with possible risk to operators. (Photo courtesy Great Lakes Steel Corp., Ecorse, Mich.)*

CONTENTS

Yes, I'm a Safety Nut—*J. P. Newell* 18
Safe Application of Vinyl Coatings—*C. G. Munger* 20
Determining Accident Costs—Part 1 22
Safer Stair Wells—*S. M. Munson* 24
NSC Profiles: Boyd D. Lewis 25
The Health Division Takes Over Eye Safety—*James R. Rule* 26
Tools for Manual Handling of Pulpwood and Logs—Data Sheet D-PP 12 28
Put Housekeeping in the Bid—*S. D. Webb* 32
"Stickmen" With Three-Dimensions 34
Industrial Safety Throughout the World 36
Diary of a Safety Engineer—*Bill Andrews* 38
Never Too Old to Learn 40
Safety Research Laboratory Dedicated by MSA 42
British Safety Head to Address Congress 46
Safety Behind the Iron Curtain 60

DEPARTMENTS

Editorial 17
Cause and Cure 31
The Lighter Side 33
The Safety Valve 37
The Accident Barometer 44
Asked and Answered 47
For Distinguished Service 50
The Safety Library 52
Obituary 54
Personals 54
Industrial Health 58
The President's Medal 61
Coming Events 62
The Honor Roll 63
The Reader's Point of View 64
Safety Posters 66
Tools for Your Safety Program 70
New Products 93

27,800 copies of this issue were printed.

BILL ANDREWS, *Editorial Director* — CARMAN FISH, *Editor*
NORVAL BURCH, *Associate Editor* — ROBERT L. MEYER, *Associate Editor*
C. H. MILLER, *Advertising Manager* — RALPH MOSES, *Art Director*

Statements and opinions advanced in signed articles are the personal expressions of their authors, not necessarily those of the National Safety Council.

Copyright 1950 by National Safety Council, Inc. Printed in U. S. A. Entered as second class matter June 21, 1921, at the Post Office at Chicago, Illinois, under the act of March 3, 1879. Subscription rate: To members, $5.00 per year, single copies, 50 cents; to non-members, $7.50 per year, single copies, 75 cents. Quantity prices for yearly subscriptions and single issues on request. Member Audit Bureau of Circulation. Indexed in Industrial Arts Index.

In This Issue . . .

WHEN J. P. Newell remembered a safety rule fifteen years ago, the life he saved by a split second was his own. That is one of the reasons he is happy to be known as a "safety nut" today. As general manager of the Pennsylvania Railroad's western region, he is trying, quite successfully, to keep several thousand railroad men from learning about safety the hard way. (Page 18).

* * *

For years safety men have used the "4 to 1" ratio in determining the indirect costs of accidents as compared with the direct costs. That has been a useful rule-of-thumb method but many have felt the need of a more exact formula. This was the objective of a research project recently completed. Part 1 of a summary of the final report is presented here. (Page 22).

* * *

Formerly eye protection at Oak Ridge National Laboratory was under the jurisdiction of the safety division. Now it is under the health division and those in charge believe that medical supervision has certain advantages. Page 26).

* * *

Our fictitious safety engineer has been on vacation and there is a change of pace in this month's Diary. In a whimsical mood he shows some plant rules in a resort setting. Cliff Benton's sketches have interpreted them in the spirit of amateur doodling. (Page 38).

National Safety Council

425 North Michigan Ave.
Chicago 11, Illinois

New York Office—800 Chrysler Bldg., New York 17. Western Office—111 Sutter Street, San Francisco

WILLIAM A. IRVIN, Chairman, Board of Trustees
JAMES TANHAM, Chairman, Board of Directors
NED H. DEARBORN, President
GUY L. NOBLE, Vice-president for Farms
O. GRESSENS, Vice-president for Finance and Treasurer
DR. D. B. ARMSTRONG, Vice-President for Homes
GEORGE A. JACOBY, Vice-president for Industry
KENNETH B. COLMAN, Vice-president for Local Safety Organization
E. W. KEMPTON, Vice-president for Membership
BOYD LEWIS, Vice-president for Public Information
DR. JOHN W. STUDEBAKER, Vice-president for Schools and Colleges
THOMAS H. MACDONALD, Vice-president for Traffic and Transportation
MRS. GEORGE W. JAQUA, Vice-president for Women's Activities

walks softly carries a big stick

STOCK No. 1616 • EXECUTIVE OFFICER

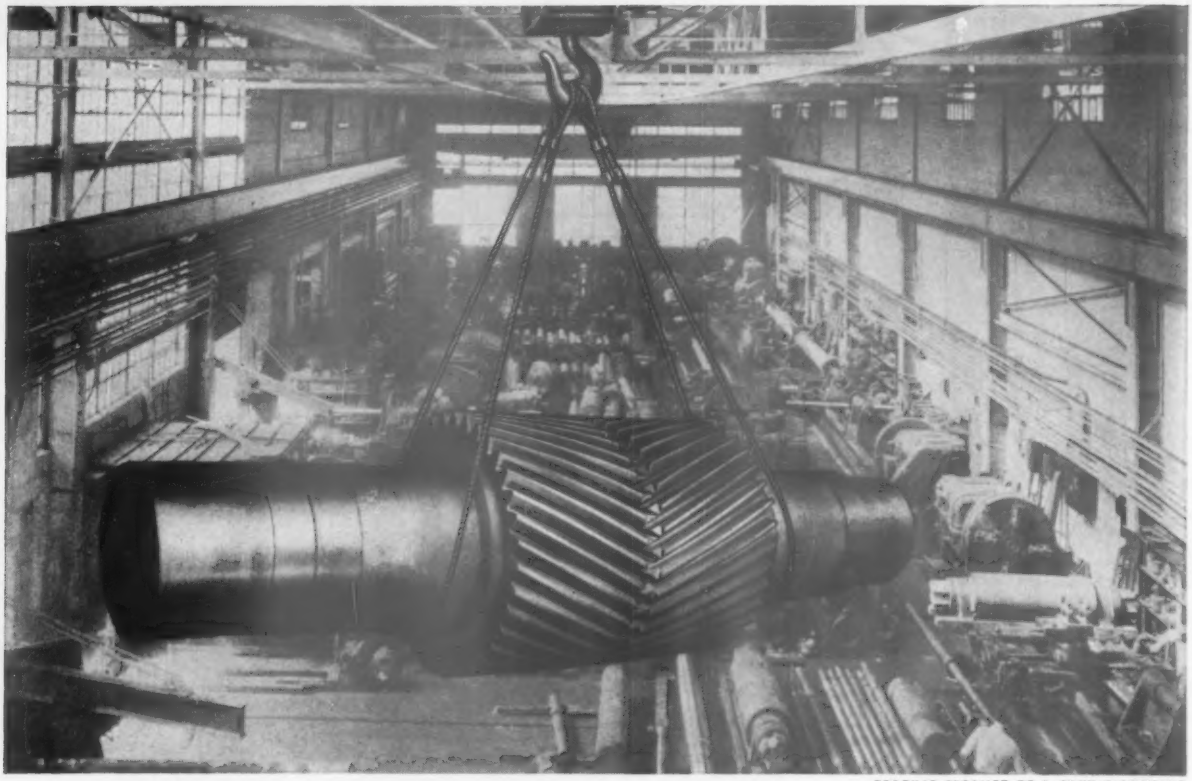
Take a smart tip from old Teddy Roosevelt. No need to carry a chip on your shoulder or a ton on your feet just to keep your toes safe. For *built in* under the sleek, smooth toe of this handsome new Lehigh safety shoe is the famous **Lockrim*** steel toe box that's always prepared for trouble "just in case". Designed by Lehigh for the U. S. Navy after their famous dress shoe, a million ex-gobs will tell you how comfortable it feels... how smart it looks. Display it to your employees. **They'll snap** it up for foot-safety in the plant... dress wear outside!

LEHIGH

Division of the ENDICOTT JOHNSON CORPORATION

SAFETY SHOE COMPANY

ALLENTOWN, PA.



FORGING PRODUCT OF A. FINKL & SONS CO.

How much is safe handling worth?

Apply this formula: THE SUM OF A DROPPED LOAD IS EQUAL TO ITS OWN VALUE AND THE VALUE OF WHAT'S BELOW IT—and you can estimate the worth of safe handling of any load . . .

● Here for example we have 15,000 pounds of finished machined forging representing hundreds of man and machine hours, costly material, design and engineering time. Added up it's a big investment. If it fell it could harm itself beyond repair and damage or destroy production machinery. Literally, put a big *DENT* in profits.

Worse still—it could seriously injure workmen. For these reasons good, safe slings—**ACCO REGISTERED WIRE ROPE SLINGS**—are tools worthy of top consideration of both safety and production men.

ACCO Registered Wire Rope Slings provide positive safety factors of 5 to 1. They are factory-made, proof-tested with a load double the rated capacity, then registered. This written and signed Register certifies that only Preformed Improved Plow Steel wires were used and that the ACCO-LOC Splices will develop 100% of the catalog strength of the wire rope.

Because the ACCO-LOC Splice does not disturb wire rope structure, stresses on all parts of the rope are equal. Only the ACCO-LOC has 2 collars on each splice as an extra safety factor. Flexible, easy-to-handle ACCO Registered Wire Rope Slings can be snubbed close and are adaptable to all sling uses, with or without fittings.

***Write today** for your free copy of the ACCO Registered Wire Rope Slings "SAFE CAPACITIES" card, which includes a guide for discarding work-worn wire rope slings.*

MEMBER THE NATIONAL SAFETY COUNCIL

ACCO

Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

AMERICAN CHAIN & CABLE

WIRE ROPE SLING DEPARTMENT

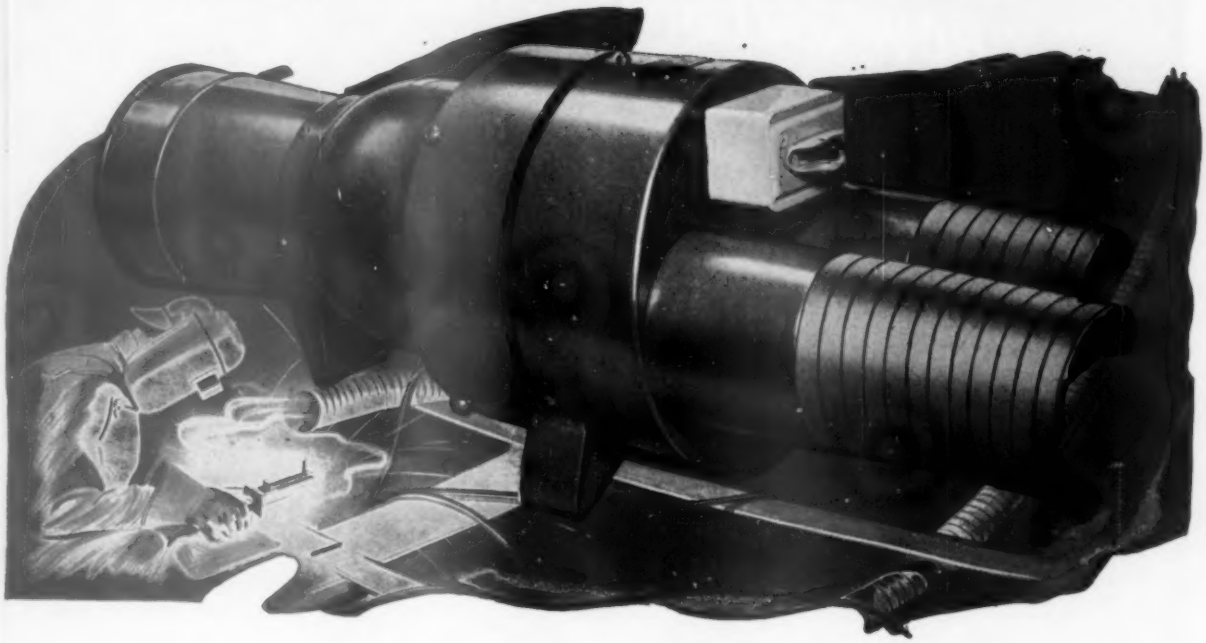
TRADE MARK

In Business for Your Safety

ACCO Registered WIRE ROPE SLINGS

An Extra Lung for A Man

HAVING TROUBLE BREATHING



The amount of work a man can do goes *down* when foul air comes *in* or the heat goes *up*. Are you giving your workers the equipment that will keep them efficient even when working in hot or noxious fumes?

Many concerns regard Coppus Blowers as "production tools" as well as "safety equipment". They help men to do more work and better work.

You can find in the Coppus line the right blower or exhauster for each "bad spot"—or perhaps one type will handle a variety of jobs. In addition to man-cooling and removing fumes from confined places, Coppus Blowers are used for cooling and drying materials and equipment. They are portable . . . efficient . . . built to Coppus "Blue Ribbon" standards of construction and workmanship in order to withstand severe usage.

Check and mail the coupon for specific information. Coppus Engineering Corp., Worcester 2, Mass. Sales Offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY, CHEMICAL ENGINEERING CATALOG, REFINERY CATALOG.

ANOTHER
COPPUS
"BLUE RIBBON" PRODUCT

COPPUS ENGINEERING CORP., 128 PARK AVENUE, WORCESTER 2, MASS.
Please send me information on the Blowers that clear the air for action.

- ☐ in tanks, tank cars, drums, etc.
- ☐ in underground cable manholes.
- ☐ in aeroplane fuselages, wings, etc.
- ☐ on coke ovens.
- ☐ on steam-heated rubber processes.
- ☐ on boiler repair jobs.

COOLING:

- ☐ motors, generators, switchboards.
- ☐ wires and sheets.
- ☐ general man cooling.
- ☐ around cracking stills.
- ☐ exhausters, welding fumes
- ☐ stirring up stagnant air wherever men are working or material is drying.

NAME.....

COMPANY.....

ADDRESS.....

CITY.....

(Write here any special ventilating problem you may have).

1 SELL EYE SAFETY TO EMPLOYEES
Ask your distributor's representative to show you the kit of posters, pay envelope inserts, PA system scripts and other material that sells workers forcefully on *desire to use* proper safety eyewear.

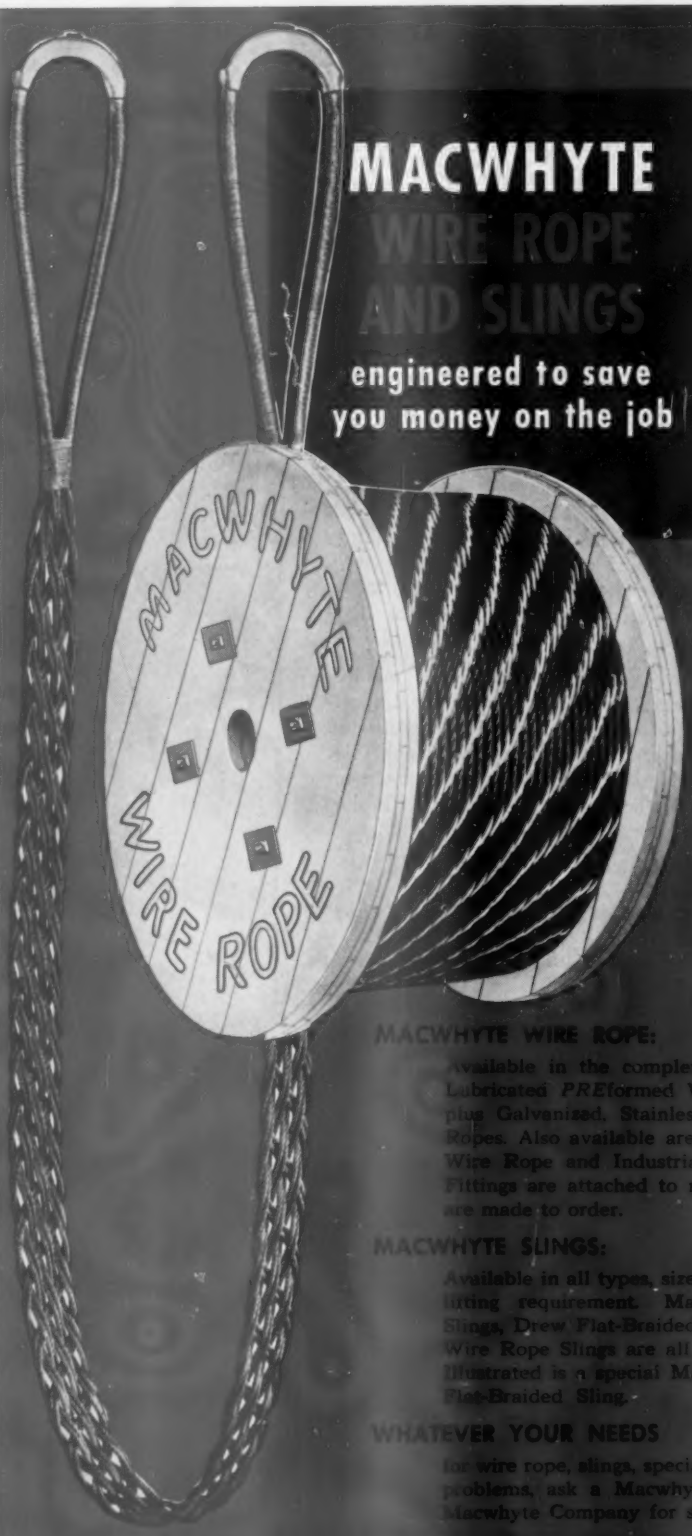
2 SAFETY GLASSES FOR EACH JOB
A complete range of Bausch & Lomb safety eyewear, engineered to meet the most rigid tests for each job classification in your plant.

3 PROTECTION *PLUS* CORRECTION
For at least 50% of your workers prescription lenses are necessary to working efficiency as well as to safety. Your B&L distributor offers prompt prescription service on all types of industrial eyewear.

MOST workers may never be led to understand the huge cost to industry and ultimately to themselves—of thoughtlessness. But they can and *do* project themselves into scenes of human suffering—as in the picture here. It is one of a series appearing on posters and in other forms Bausch & Lomb offers for use in your plant to educate workers in the *desire to wear* safety glasses.

Your eye safety program is *total* only when it includes *total service.* Write Bausch & Lomb Optical Company, 691-T, St. Paul St., Rochester 2, New York, for complete information on a total eye service.

BAUSCH & LOMB *Safety Eyewear*



MACWHYTE WIRE ROPE AND SLINGS

engineered to save you money on the job

Ask Macwhyte to recommend the type and size of wire rope best suited for your needs. *There are a thousand and one wire ropes made by Macwhyte.* Specifications for the correct sling for any lifting need are yours from Macwhyte for the asking.

Prevent loss!
Save time!
Be sure!

MACWHYTE WIRE ROPE:

Available in the complete Macwhyte line are Internally Lubricated *PRE*formed Wire Ropes for all equipment—plus Galvanized, Stainless Steel, and Monel Metal Wire Ropes. Also available are special assemblies of Macwhyte Wire Rope and Industrial Standards "Safe-Lock" fittings. Fittings are attached to rope by swaging—and assemblies are made to order.

MACWHYTE SLINGS:

Available in all types, sizes and lengths, to meet almost any lifting requirement. Macwhyte ATLAS Round-Braided Slings, Drew Flat-Braided Slings and Monarch Single-Part Wire Rope Slings are all made to order to fit your needs. Illustrated is a special Macwhyte Drew 14-part Type 1CT Flat-Braided Sling.

WHATEVER YOUR NEEDS

for wire rope, slings, special assemblies, solutions for special problems, ask a Macwhyte distributor or write direct to Macwhyte Company for suggestions and recommendations.

MACWHYTE COMPANY, 2902 *Fourteenth Avenue, Kenosha, Wisconsin. Manufacturers of Internally Lubricated Wire Rope, Braided Wire Rope Slings, Aircraft Cables and Assemblies, Monel Metal and Stainless Steel Wire Rope.. Our distributors and mill depots throughout the U.S.A. and other countries carry stocks for immediate delivery. Catalog on request.*
Mill Depots: New York • Pittsburgh • Chicago • Minneapolis • Fort Worth • Portland • Seattle • San Francisco • Los Angeles

Here are the Makings of an Off-The-Job Safety Campaign

THAT WILL COST VERY LITTLE, YIELD BIG RETURNS

The Operation Safety Leaflets illustrated on this page are prime material for an off-the-job safety campaign. For a cost of less than 2 cents each, they can help you protect your workers from traffic accidents — America's Number 1 cause of accidental deaths.

Operation Safety Leaflets are published monthly by the National Safety Council's Traffic Department. Each leaflet is pocket-sized, 4 pages, printed in 2 colors, and attractively illustrated. Each "ties in" with a monthly slogan that sets the keynote for a nation-wide traffic accident campaign. Typical monthly slogans are:

"Drive Slow in Rain, Sleet, or Snow"
"Can You Stop in Time?"
"Don't Take A Chance—Know and Obey Traffic Laws"
"Watch Out for Kids"
"Check Your Car — Check Accidents"
"Speed Kills — Take It Easy"
"Don't Rely on the Other Guy"
"Don't Let Death Take Your Holiday"

Sample copies will be sent on request.

NOW AVAILABLE ON A SUBSCRIPTION BASIS

Now, for the first time, you can order Operation Safety leaflets on a yearly subscription basis. Take time today to check into this low-priced, effective plan for conducting a year-round, off-the-job accident campaign.

PRICES	One Month	Annual Subscription
1 to 9 each	$ .05	$ .50
10 to 99 each	.018	.18
100 to 999 each	.015	.15
1,000 to 4,999 each	.013	.13
5,000 to 24,999 each	.011	.11

Prices on 25,000 or more on request.

NATIONAL SAFETY COUNCIL

425 NORTH MICHIGAN AVENUE
CHICAGO 11, ILLINOIS

BIGGER BARGAIN

The telephone takes a smaller part of the family budget than in 1939...

One of the attractive and remarkable things about telephone service is its low price.

It actually takes a smaller part of the family budget than it did ten or eleven years ago. That's because the average family income has increased much more than the increase in telephone rates. Even though increases in telephone rates are still needed to catch up with past increases in costs, your telephone will continue to be a big bargain. The increases so far, plus those now requested, average only a penny or so per call.

At the same time, there has been a big increase in the value of the telephone. On the average, you can now call more than twice as many telephones in your local area as in 1939.

BELL TELEPHONE SYSTEM

Electrical HAZARD SIGNS

DANGER HIGH VOLTAGE

KEEP AWAY DANGER HIGH VOLTAGE

CAUTION ELECTRIC TRUCKS GO SLOW

DANGER 440 VOLTS

DANGER 2,300 VOLTS

CAUTION OPEN SWITCHES BEFORE REPLACING FUSES

DANGER UNDERGROUND LIVE WIRE

DANGER MAN WORKING ON LINE DON'T THROW SWITCH

CAUTION DO NOT USE ON ELECTRICAL FIRES

KNOCKED OUT by HY VOLT!

WHEN Hy Volt hits a man he stays hit . . . usually injured, often killed.

For while Electricity serves virtually every Industrial need, it is only with care and experience . . . and constant warning . . . that workers are taught to safeguard themselves against such accidents.

Many more Electrical Hazard signs are shown in our Catalog No. 8. It's free on request.

STONEHOUSE SIGNS
For Accident Prevention

help to educate, warn, safeguard those who work with and around Electrical equipment. Post them for greater safety.

Stonehouse SIGNS, INC. Stonehouse Bldg. · 9th at Larimer · Denver 4, Colorado

MANUFACTURERS

"Stonehouse Signs Since 1863"

ACCIDENT PREVENTION SIGNS IN STANDARD COLORS AND DESIGNS

FEATURE ATTRACTION IN SAFETY PROMOTION

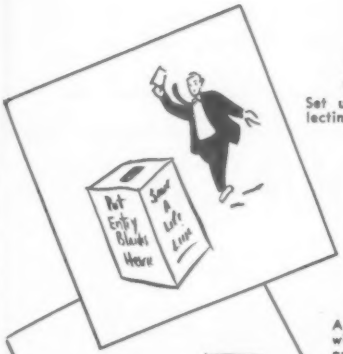
The National Safety Calendar and the Monthly Cash Prize Contests

1 Distribute the National Safety Calendar to each of your employees by mail or in person.

2 [illegible] the complete Calendar Kit that shows how to promote both the National Safety Council Prize Contests at your own plant [illegible]

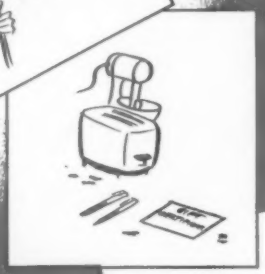
3 [illegible] posters [illegible] throughout the plant to get interest [illegible]

4 Post the bulletins furnished on the contest on your bulletin board.



5 Set up boxes for collecting contest entries.

6 Arouse interest with special announcem[illegible]



7 Honor your own plant contest [illegible] ners every [illegible]

8 Watch how [illegible] safety education [illegible] accident prevention [illegible] plant and in the hom[illegible]

SEE NEXT PAGE
FOR SPECIAL DISCOUNT OFFER
ON 1951 SAFETY CALENDARS

SPECIAL **2%** DISCOUNT

IF YOU ORDER YOUR

1951 SAFETY CALENDARS

NOW!

The National Safety Council will allow a 2% discount on all orders postmarked not later than September 30, 1950. This savings is offered for your cooperation in expediting printing orders. You can avoid delays and save money by sending in your order on the form below right now.

PRICE SCHEDULE		MEMBER		NON-MEMBER	
Quantity	F.O.B. CHICAGO	Packed Flat in Bulk	In Mailing Tubes	Packed Flat in Bulk	In Mailing Tubes
1 to 9		50¢ each	55¢ each	60¢ each	65¢ each
10 to 199		48¢ each	51¢ each	55¢ each	58¢ each
200 to 999		40¢ each	43¢ each	45¢ each	48¢ each
1,000 to 9,999		36¢ each	39¢ each	39¢ each	42¢ each
10,000 or more		33¢ each	36¢ each	36¢ each	39¢ each

2% DISCOUNT—will be allowed on all orders postmarked not later than September 30, 1950, provided that payment is made on or before December 1, 1950. Delivery will be made in November, unless otherwise specified.

NATIONAL SAFETY COUNCIL

425 North Michigan Avenue, Chicago 11, Illinois

Fill in and Mail This SPECIAL RESERVATION FORM Today!

National Safety Council
425 North Michigan Ave., Chicago 11, Ill.

We want to take advantage of the 2% discount on our requirements for the 1951 National Safety Calendar.

Please place our order for ..... Calendars and rush us your regular order form so we can give you imprinting and shipping instructions.

Name..... Title.....

Company Name.....

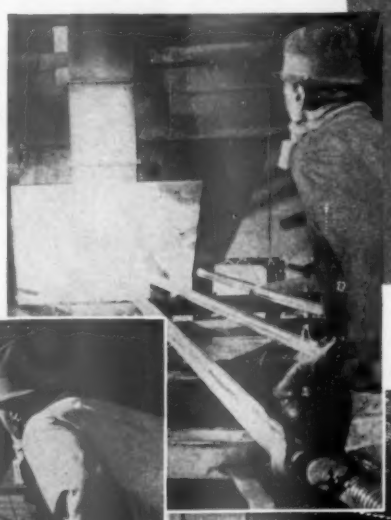
Address.....

City, Zone, State.....

dip galvanizing operation made safer, cheaper by

Sturtevant

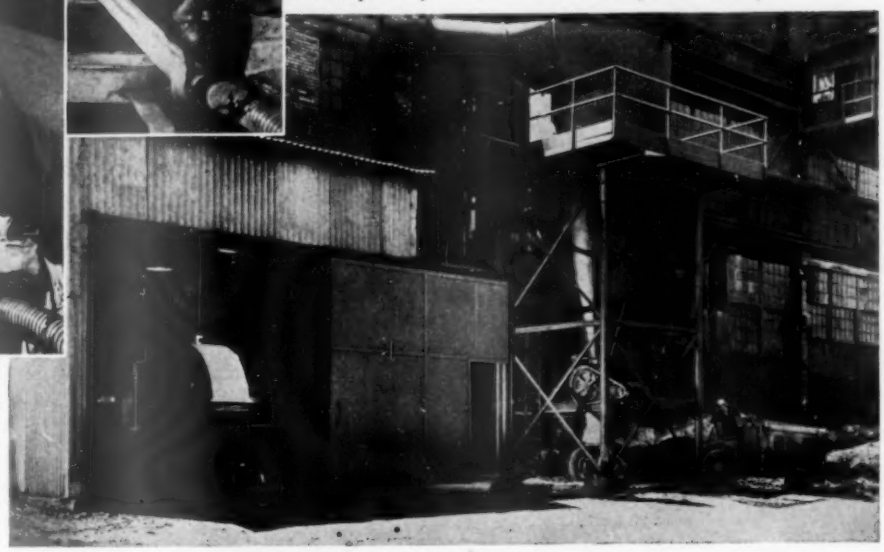
ENGINEERED DUST CONTROL



Collecting hood fan is turned off to show how zinc dust and steam billowed out of pipe before system installation.

When fan is in operation, dust and steam are almost completely absent.

Below, special cyclone dust collector, with fan house at left.



A large steel plant formerly removed excess zinc from inside their fabricated pipe after dip galvanizing by a blast of high-pressure steam. This created inflammable fumes, raised hazardous zinc dust and caused considerable waste.

Sturtevant application engineering was utilized by the steel company's engineering department in the design of collecting hoods. These were used to trap the dust and fumes as they were blown from inside the pipe and conveyed through steel ducts to a cyclone dust collector.

The system with its Sturtevant fan equipment has been in operation for over a year, and has proven highly successful. *Occupational hazards from fumes and dust have been eliminated. Profitable reclamation of metallic zinc and zinc oxide is possible, and maintenance costs are lower.*

Wherever dusts adversely affect the health and operation of men or machinery, look to Sturtevant for application engineering in dust control and collection. To get complete information on your problem, write to Westinghouse Electric Corporation, Sturtevant Division, Hyde Park, Boston 36, Mass.

YOU CAN BE SURE...IF IT'S

Westinghouse

J-80188

Economy

. . . one of many merits

THE WORDS of praise which are constantly applied to Pax-Lano-Sav Heavy Duty by legions of happy users to describe its merits have given it a singular place of honor among all fine skin cleansers.

Words like "superb quality," "dependable safety," "unsurpassed cleansing ability," and a host of others occur in hundreds of unsolicited testimonials. However, customers of many years of use-experience with Pax-Lano-Sav Heavy Duty need no superlatives to emphasize their satisfaction. Continued use is their recommendation for its excellence.

There is also another potent word which customers frequently use in recommending Pax-Lano-Sav Heavy Duty to others. That word is "Economy." Its marvelous formulation, the skillful blending of its many fine ingredients, its outstanding cleansing efficiency, have actually reduced the cost of usage far below that of many other occupational skin cleansers which sell for less per pound. The use of Pax-Lano-Sav Heavy Duty convincingly demonstrates that "Economy" is also one of its many merits.

Try this remarkable skin cleanser yourself. Then you too will seek words of commendation to describe a wonderful experience in what an occupational skin cleanser should and can do.

PAX-LANO-SAV HEAVY DUTY

GRANULATED SKIN CLEANSER

PAX®

PAX-LANO-SAV*—a superior skin emollient combining lanolin and other special skin normalizers.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

The Pax trademark symbolizes a deep-rooted tradition of superlative quality maintained through a quarter century of continuous research and development.

G. H. PACKWOOD MANUFACTURING CO. • 1545-55 TOWER GROVE AVE. • ST. LOUIS 10, MO.

Manufacturers of Fine Industrial Skin Cleansers

*Tradename of G. H. Packwood Mfg. Co.

In addition to PAX-LANO-SAV HEAVY DUTY, PAX also offers the following powdered or granulated quality skin cleansers: PAX CORN-TEX • PAX HYSPEED • DICTATOR SPECIAL PURPOSE • BORAPAX • SUPER-X • VELVAPAX LIGHT DUTY • OFFICE-PAX • PAX MECHANICS. Also available are PAX WATERLESS and PAX HECTO INK CLEANSING CREAM • PAX SKIN CLEANSER ECONOMIZER DISPENSERS • and many other fine PAX Products. 50-D

. . . gives Kidde Dry Chemical Fire Extinguisher a 44% margin of safety!

The Factory Mutual Laboratories require that a 20 pound dry chemical fire extinguisher effectively cover 25 square feet of burning area . . . but the *Kidde* 20 pounder blanketed 36 square feet . . . *gave 44% extra coverage, extra safety!*

Kidde Dry Chemical Fire Extinguishers are quick and sure for fires in flammable liquids, live electrical equipment and for textiles. *Kidde* Trigger-Finger Control lets you just pick up extinguisher, point the horn and pull the trigger. *Kidde* streamlined diffuser horn gives you improved, cloud-like discharge pattern, greater coverage, and a heat-insulating blanket to guard the operator. The dry chemical absorbs heat, smothers flames, reaches corners, cracks, crevices. When these *Kidde* units go on, flames go out.

Kidde Dry Chemical Fire Extinguishers in 20 and 30 lb. units, are built to last, easy to use, simple to recharge . . . and give you a big margin of safety. Use the right kind of extinguisher for the right kind of fire—use *Kidde*.

Walter Kidde & Company, 845 Main St., Belleville 9, N. J.

In Canada: Walter Kidde & Company, Ltd., Montreal, P. Q.

Bad weather ahead!
it's time for BOOTS

H751-1
8" Brown Vesta, double leather sole, leather heel.

Where can you find as wide a selection as HY-TEST'S?

WRITE FOR CATALOG

H752-5
8" Brown Glove, leather midsole, cord outsole and heel.

H753-5
8" Brown Glove, full double leather sole, leather heel.

H754-2
8" Brown Glove, leather midsole, neocord outsole and heel.

H755-1
8" Rosite, full double leather sole, leather heel.

H799-1
10" Black Retan, neocord sole and heel.

H797
8" Brown Glove, leather midsole, neocord outsole and heel.

H796
8" Rosite l... midsole, r... outsole and...

H798
8" Rosite, leather and composition triple sole, rubber top piece heel.

H756-1
10" Black Retan, leather midsole, composition outsole, rubber heel.

H831
10" Brown Retan, leather midsole, composition outsole, rubber heel.

H757
16" Rosite, d... leather s... sole, le... heel.

. . . Insure Workers' Feet in Sure Protection

with HY-TEST ANCHOR FLANGE* SAFETY SHOES

*TRADEMARK REG. U. S. PAT. OFF.

THE WORLD'S LARGEST SELLING SAFETY SHOE

HY-TEST DIV: INTERNATIONAL SHOE COMPANY • SAINT LOUIS 3, MISSOURI

NEW YORK OFFICE: SUITE 1708, 225 W. 34TH ST. • EASTERN OFFICE: MANCHESTER, N. H.

HY-TEST SAFETY SHOES

NATIONAL
SAFETY NEWS

AUGUST, 1950

KOREA

WE ARE NOT, as these lines are written, formally at war.

But the news of pitched battles between tanks, the pictures of our dead among the rice paddies, the casualty lists in the newspapers all make it clear that we are no longer at peace.

We have undertaken on behalf of the United Nations a job of halting aggression in the hope of restoring peace. It has been called "police action," but it is police action on an unprecedented scale.

It is one of the deeply ironic truths of our civilization that the commitment of our youth to the hazards of battle places upon us all the responsibility for greatly increased effort to prevent loss of life at home.

In peace, concern for safety is an individual company problem. A worker may, if he chooses, continue hazardous practices. A company may slight its accident prevention activities. The failures of either company or worker are a threat primarily to the worker, his family, and the company. In pain, in dollar loss, in personal or company reputation, the losses are predictable and reasonably direct.

But as long as we commit a single division to action, every accident at home is a direct service to those forces our men face in combat. Every accident endangers a young man overseas who already has accepted terrific risks in our behalf.

Industrial safety men face this increased responsibility in a situation which of itself creates special difficulties. In many companies, changes in production caused by the fighting are already demanding a measure of conversion—the third such conversion in a decade. In most other companies, the possibility of such conversion soon is very real.

And beyond these immediate effects is the further possibility of disruption of the labor force which a large-scale draft may bring.

This is a situation in which the industrial safety engineer has a special responsibility to plan ahead for what we all pray may not happen. It is a situation which calls for careful review of both the wisdom and the errors displayed in meeting the crisis of the early 1940's.

Most especially, I believe, this is the time for safety men in industry to bring home to their employees the treasonable character of the kind of behavior which greeted the opening of the Korean fighting—the ruthless slaughter of 800 Americans in needless accidents over the Fourth of July.

Maybe we need our vacations this summer. Maybe vacations will be hard to come by in the years ahead. But we have no right to betray our fighting youth by slaughtering our own productive forces at home under the guise of a holiday.

Let's be sure that Labor Day doesn't turn into a labor of death that brings joy only to those who oppose the cause of peace and freedom.

Ned H. Dearborn

Yes, I'm a Safety Nut...

Another step and I'd have been in front of the train. I remembered a safety rule—just before it was too late.

By J. P. NEWELL

I'M IN the operating department, but some people on our railroad consider me a safety nut. I am delighted to be known as one. Perhaps you would like to know why.

Have you ever gone out along the tracks and picked up a fellow employee in four parts and put them on a stretcher—to die on the way to the hospital?

Well, I did in 1928 when I was assistant supervisor at Pittsburgh. That's one reason.

Have you ever walked up to a main track and then stopped involuntarily to look to the left and then to the right—because the safety rule says to look in both directions before crossing a track—and there on the left some 75 feet away you see a train coming at 75 miles an hour?

That happened to me in 1935 in Chester. I froze, scared to death, on the edge of the ballast shoulder while the train passed just three feet away. Another step and I'd have been on top of the rail in front of the train. That's a second reason; I owe my life to remembering a safety rule just before it was too late.

One day in 1931, when I was a track supervisor at Pittsburgh, I was overwhelmed to receive a personal letter from Tom Carrow, superintendent of safety on the Pennsylvania, praising the manner in which a personal injury in my territory had been investigated. The investigation had developed thoroughly (1) exactly how the injury occurred, (2) who or what was responsible for the injury, and (3) how similar injuries could be prevented in the future.

Interest at Ground Level

That one item—a complete investigation to bring out those three facts—is the first requirement in any successful and continuous safety program.

In 1936, when I was assistant division engineer on our Middle Division at Altoona, I became aware of a second prerequisite for a successful program. At that time I was in charge of safety activities in the Maintenance of Way Department in the Middle Division. Despite intensive and vigorous effort on my part, review of files on every reportable injury, frequent safety meetings and letters to supervision, the safety program on the division was a failure.

One item in that program was a contest conducted for the benefit of all employees, with prizes of more than $100, for the best statement in 25 words on "Why I am interested in safety." Only 23 replies were received from 700 employees. The accident rate went up instead of down.

But I did learn one outstanding fact—the second prerequisite is interest of the men at the ground level and teamwork by all concerned. No successful safety program can be conducted without their interest and enthusiasm.

It was 1946, shortly after I was

assigned to Harrisburg as general superintendent, that I became aware of the third prerequisite. Prior to that time the motivating force in safety on our railroad was the superintendent of safety at Philadelphia. The general managers and general superintendents were very much concerned over the unsatisfactory safety performance. However, at the monthly staff meetings only five minutes was allotted to the discussion of safety. Frequent letters written by company officials and superintendents bemoaned the unsatisfactory situation but little time or thought was spent on it.

Management's Backing

Consequently, you can appreciate my astonishment when I attended my first staff meeting in Philadelphia and found three hours in the morning devoted exclusively to safety and two hours in the afternoon assigned to operating problems. In the three hours of my first regional safety meeting I accomplished more in the way of constructive thinking and planning than in any previous three months.

The general manager conducted these meetings personally and led the discussion, which consisted of a review of unusual personal injuries for the previous month. This was followed by an interchange of ideas and plans for improvement of safety performance.

I learned that a third prerequisite was the whole-hearted interest and backing of every official on the railroad — that supervision must be willing to spend time on safety, giving it careful thought and whole-hearted backing.

The progress of the Eastern Region, working under a safety program based on these essentials, is illustrated by the record. In 1945, the injury rate was 13.42 reportable injuries per millon manhours. Improvement was noted in each of the following years until in 1948 the rate was 5.51, and for nine months of 1949 it was 4.88—a reduction of 64 per cent in 3½ years.

In July 1948, subsequent to my transfer to the Western Region as general manager in Chicago, we introduced a new safety program. Basically it was the Eastern Region's with a few additions which we considered improvements. For the first 8 months of 1949 as compared with the same period of 1948 there was a drop of 55 per cent in personal injuries. From 12.46 the rate dropped to 5.66. During March, four out of nine divisions completed the month without a reportable injury and this performance was duplicated in June.

The basic 14-point safety program, developed in June 1948 at a meeting attended by the superintendents, general superintendents, my immediate staff and the chief claim agent, was placed in the hands of every supervisory official in the region.

To implement this program, monthly regional safety meetings are held by me and attended by my immediate staff, the superintendents and the chief claim agent. At every other meeting the superintendents bring with them a selected group of minor supervisory officers, such as yardmasters, gang foremen, and track supervisors, so they can observe first-hand management's interest in the safety problem.

J. P. NEWELL is General Manager, Western Region, Pennsylvania Railroad, Chicago. This article has been adapted from an address before the Railroad Section, 37th National Safety Congress.

These meetings usually last two to three hours and precede my operating meeting. As general manager, I have been present at every meeting and conducted it personally. Here we have a forum for the discussion of safety problems and dissemination of ideas. On occasion it has required a little ingenuity to promote safety discussions, but at every meeting interest and enthusiasm have developed to the extent that it has been difficult to bring the meeting to a close.

Safety Representatives

We are constantly on the alert to suggest new methods of approach to the officials who attend, particularly the superintendents. On one occasion all of the district claim agents on the region were brought in to attend a joint meeting with the superintendents and much was accomplished. Since that time the relationship between the superintendents and the division claim agents has been most harmonious. They exchange reports and findings, and this cooperation has gone far to show employees that we mean business.

Comments on certain items of our program may be of interest. One item concerns the safety representative on each division. He is an employee chosen for his interest in safety. He may be a conductor, a gang foreman, or a clerk. He is paid the rate of his position and, in effect, he is the superintendent's personal safety representative.

He must know about every personal injury immediately after it occurs and follow it through to a conclusion to see that the man returns to work as soon as possible. He is also charged with seeing that the supervisory officers conduct the investigation with thoroughness and dispatch. The balance of his time is spent visiting men on the division, talking to them individually and at small group meetings, and observing any items pertaining to safety. He is in daily contact with the superintendent.

—To page 76

Spraying a jeep chassis in water-wash spray booth. In general, similar precautions are necessary for various coatings.

Safe Application of Vinyl Coatings

By C. G. MUNGER

Synthetic resin coatings have a wide range of uses in industry. Their safe use requires a knowledge of the properties of these resins and their solvents.

IN the past ten years the use of vinyl resin coatings has been expanded into almost every industry in the United States, including petroleum, chemical, food, and paper. More recently it has been introduced in the marine industry for the exterior protection of ships, also for use on the interior of tanker and cargo tanks where chemicals must be protected either against possible contamination or the steel tanks must be protected against severe corrosion. In all of these industries safety is of primary importance.

While hundreds of thousands of gallons of vinyl resin coatings have been used in these industries, there have been objections from time to time from safety departments because these materials were somewhat different from conventional paint. The feeling has been that because of the different solvents used, additional application hazards were present.

Because of the importance of this class of synthetic resins in protecting chemicals from contamination and protecting tanks against corrosion, it is felt that an answer to these objections should be made, and to demonstrate that the vinyl resins can be safely applied throughout industry.

Three points have been brought up:

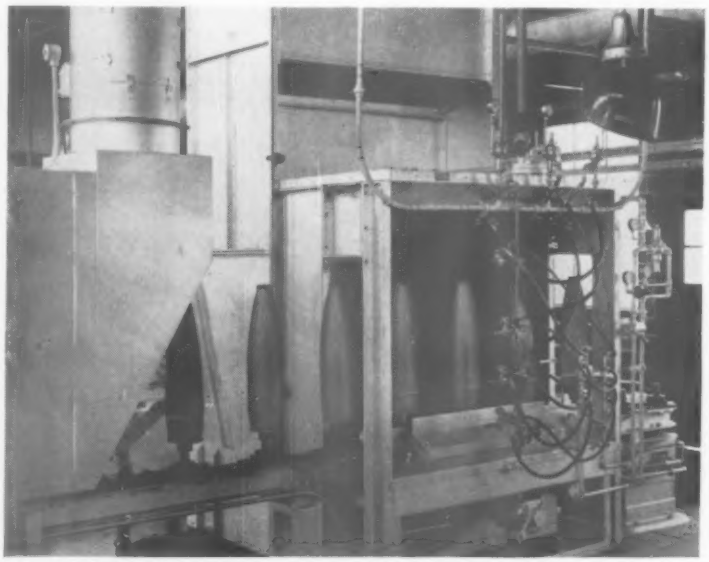
1. It has been stated that solvent fumes from vinyl coatings are a new hazard, as this property has not been typical of paint in the past; the solvents used in vinyls have a flash point of 70° F. or lower in contrast to a a flash point of 120° F. or lower for other paints.

2. It has been stated that vinyls are a greater fire hazard during application since dried vinyl coatings have the additional characteristic of burning until completely consumed.

3. Solvents in vinyl coatings have anesthetic and toxic properties.

Each of these points should be fully clarified and they will be taken up individually.

Point 1. It is true in general



Automatically spray coating 155 mm. shell as they pass through water-wash spray booth. At left, shells are entering dryer after being coated.

C. G. MUNGER is Technical Director, Amercoat Corp., South Gate, Calif.

TABLE I

Properties of Flammable Liquids Used in Paints and Lacquers

Name	Flash Point °F. Closed Cup	Flash Point °F. Open Cup	Explosive Limits % by Volume in Air Lower	Explosive Limits % by Volume in Air Upper	Vapor Density (Air=1.00)	Boiling Point °F.
Acetone	0	15	2.15	13.0	2.00	134
Amyl Acetate-n	76	80	1.1	.....	4.49	300
Amyl Alcohol-n	91	120	1.2	.....	3.04	280
Benzene	12	.....	1.4	8	2.77	176
Butyl Acetate-n	72	90	1.7	15	4.00	260
Butyl Alcohol-n	84	110	1.7	.....	2.55	243
Cellosolve	104	120	2.6	15.7	3.10	275
Cellosolve Acetate	124	135	1.71	.....	4.72	313
Cyclohexanone	147	.....	.....	.....	3.38	313
Ethyl Acetate	24	30	2.18	11.5	3.04	171
Ethyl Alcohol	55	.....	3.28	19	1.59	173
Fuel Oil No. 1	100-165	.....	.....	.....	.....	.....
Gasoline	–50	.....	1.3	6	3-4	100-400
Hexane-n	–7	.....	1.25	6.90	2.97	156
Kerosene	100-165	.....	.....	.....	.....	.....
Methyl Alcohol	54	60	6.0	36.5	1.11	147
Methyl n-Butyl Ketone	.....	95	1.22	8.0	3.45	262
Methyl iso-Butyl Ketone	73	.....	1.34	8.0	3.45	244
Methyl Ethyl Ketone	30	.....	1.81	11.5	2.41	176
Methyl n-Propyl Ketone	.....	60	1.55	8.15	2.96	216
Mineral Spirits	100-110	.....	1.1	6.0	.....	300-400
Naphtha, Coal Tar	100-110	.....	.....	.....	.....	300-400
Naphtha, Safety Solvent	100-110	.....	1.1	6.0	.....	300-400
Naphtha, V. M. & P.	20-45	.....	1.2	6.0	.....	212-320
Propyl Alcohol-n	59	85	2.5	.....	2.07	207
Propyl Alcohol-iso	53	60	2.5	.....	2.07	181
Stoddard Solvent	100-110	.....	1.1	6.0	.....	300-400
Toluene	40	45	1.27	7.0	3.14	232
Turpentine	95	.....	0.8	.....	.....	300
O-Xylene	63	75	1.0	.....	3.66	291

that the flash points of solvents used in ordinary oil paints may be slightly higher than those used in the vinyl resin or in any of the new synthetic resin coatings. This statement, however, applies strictly to oil paints and does not necessarily include varnishes, quick-drying enamels, and many other coatings which are currently used.

Table I includes most of the solvents used in and with common paint, varnish, lacquer and synthetic resins. This list gives both open and closed cup flash points for the solvent, upper and lower explosive limits, density of solvent vapor compared with air, and boiling point. All these properties must be considered in areas of restricted ventilation.

It will be noted that V. M. and P. naphtha, a very common solvent in the so-called older type of paint coatings, has a flash point of 20-45° F., with a lower explosive limit of 1.2 per cent. The safety solvent naphtha, which is one of the most widely used solvents in paint and includes Stoddard solvent and mineral spirits, has a closed-cup flash point of 100-110° F. with a lower explosive limit of 1.1 per cent. Turpentine has a closed cup flash point of 95° F. and a lower explosive limit of 0.8 per cent. These are the main solvents for paint-type coatings.

For enamels, some lacquers, and many varnishes it is necessary to include aromatic fractions to increase solubility. The common materials here are:

Toluene—closed cup flash point 40° F., lower explosive limit 1.27 per cent.

Xylene—closed cup flash point 63° F., lower explosive limit 1 per cent.

The flash point of these materials which are in common use in paints, varnishes, and enamels range from 20 to 110° F. and the lower explosive limits range from 0.8 per cent for turpentine to 1.27 per cent for toluene.

Solvents common for synthetic resin coatings and vinyl resin coatings are:

Butyl acetate—closed cup flash point 72° F., lower explosive limit 1.7 per cent.

Methyl ethyl ketone—closed cup flash point 30° F., lower explosive limit 1.8 per cent.

Methyl isobutyl ketone—closed cup flash point 73° F., lower explosive limit 1.34 per cent.

Some of the wash prime coat-

—To page 88

TABLE II

Thermoelectric Fire Retardant Tests

Made at Philadelphia Naval Shipyard Industrial Test Laboratory, December 9, 1949

Product Used	No. of Coats Hand Brushed	Approximate Film Thickness
1. U. S. Navy Fire Retardant Paint 52-P-22	3	15 mils
2. Vinyl 1	3	3 mils
3. Vinyl 2	3	3 mils
4. Vinyl 3	3	4 mils

The following are the results observed:

Product Used	Panel A	Panel B	Panel C
1. U. S. Navy Fire Retardant Paint 52-P-22	OK	OK	OK
2. Vinyl 1	OK	OK	OK
3. Vinyl 2	OK	See*	OK
4. Vinyl 3	OK	OK	OK

**This was considered by the Navy official conducting the test as a flash.*

Determining ACCIDENT

PART 1

SAFETY engineers know that reports on progress which show dollars saved are often more meaningful to management than are reports based solely on accident frequency and severity rates. Cost data on accidents are also useful in gaining the cooperation of foremen, who well understand that their departments must be run profitably.

Accidents, for the purpose of this study are defined as including the two following types:

1. Accidents resulting in industrial injuries as defined by the American Standards Association for the purposes of compiling industrial injury rates. They are injuries sustained by employees in the course of and arising out of their employment, including industrial diseases.

2. Accidents, arising out of the activities of a company, that cause property damage or interfere with production in such a manner that personal injury *might* have resulted.

Elements of Cost

Only those elements of accident cost that can be clearly demonstrated to have resulted from accidents and which can be measured with reasonable reliability are included in this method of computing costs. Among the costs considered too intangible for measurement are the effects of accidents on employee morale and on wage rates necessary to secure and retain workers.

One element of cost is clear and obvious—the premium on compensation insurance, or the payments on compensation cases by self-insured companies. Among the non-insured costs, the following are considered to be the useful factors:

1. *Cost of wages paid for time lost by workers who were not injured.* These are the employees who stopped work to watch or assist after an accident, or to talk about it, or who lost time because they lacked equipment damaged in the accident, or because they needed the output or aid of the injured worker.

2. *Cost of damage to material or equipment.* The validity of this charge (which includes repair and putting into order damaged or disordered material and equipment) cannot be questioned. However, the determination of the charge to be made is complicated in some cases. Ordinarily, the charge will be the depreciated worth of a machine made useless by an accident minus the salvage value of the wreck. But a machine may have value even though written off by accountants as fully depreciated, and another machine may have depreciated so little that it cannot be replaced by an equally good machine except by paying more than the original market value of the machine. These problems should be worked out with the help of a good cost accountant.

3. *Cost of wages paid for time lost by the injured worker other than workmen's compensation payments.* This is time lost mainly on the day of the accident and on later days when he leaves work to secure medical treatment, but also includes payments made during waiting periods and payments made to supplement workmen's compensation payments.

4. *Extra cost due to overtime work necessitated by the accident.* If production lost because of the accident is made up by working overtime, the accident should be charged with the difference in cost. Included in this charge are the cost of any extra supervision, heat, light, cleaning, etc., required by the overtime.

5. *Cost of wages paid supervisors while their time is required for activities resulting from the accident.* While the company does not pay the supervisor any extra salary for this time, it does lose his services from his other duties. Therefore, the full charge to the accident of his salary for the time required to handle the problems created by the accident is justified.

6. *Wage cost due to decreased output of injured worker after return to work.* If an injured man's output after returning to work is reduced by 40 per cent without reduction in wages, 40 per cent of his wages should be charged as an accident cost.

7. *Cost of learning period of new worker.* If an accident creates the need for a new worker, there is usually a learning period in which production is low. It should be charged to the accident in the same way as indicated in Point 6 above. Cost of any extra time required by supervisors or others in training the new worker should be added to this charge.

8. *Uninsured medical cost borne by the company.* This cost is usu-

COSTS

In 1945, the National Safety Council, through its Industrial Conference Committee on Research, undertook a study of methods of calculating accident costs. The Committee, headed by Dr. William P. Yant, selected R. H. Simonds to conduct the study, assisted by the Council's Statistics Division and Committee members. The accompanying article is a condensed version of the final report of the Committee.

ally that of medical services provided at the plant dispensary. There is no great difficulty in calculating the average cost per visit for medical attention needed because of accidents. Though it is true that a dispensary would be needed in many plants even if there were no accidents, it is also true that the staff of a dispensary could be well employed on many other jobs affecting the health and efficiency of the plant if it was not tied up handling accident cases. To check the validity of this argument, questionnaires were sent to safety directors, personnel managers, superintendents and medical departments. Of 311 answers, 270 agreed that if accidents were reduced, the first-aid department would make valuable use of time saved.

9. *Cost of time spent by higher supervision and clerical workers on accident investigations or processing compensation applications.* Time charged to the accident is that spent by supervision (other than the supervision covered in Point 5 above) and clerical personnel in investigating the accident or settling claims.

10. *Miscellaneous unusual costs.* These include the less typical costs, the validity of which must be shown clearly by the investigator in a particular case. Among these are public liability claims, cost of renting replacement equipment, loss of profit on contracts cancelled or orders lost if the accident causes a long-run reduction in total sales, loss of bonuses by the company, cost of hiring new employees if the expense is significant, cost of *excess* spoilage by new workers, and demurrage.

Costs Not Considered or Strictly Qualified

The following discussion presents the reasons why certain elements sometimes considered accident costs are not included in the recommended method of computing costs, or are included only under strict limitations.

1. *The cost of hiring a new employee* may, as in Point 10 above, be considered. However, in most cases in large companies the procurement of personnel is a regular and continuing process, and no measurable increase in cost results from a need for one more worker. For this reason, the *average* cost of hiring a new worker to replace one injured is not a valid charge against the accident, but only the *variable cost* where it can be demonstrated that the particular hiring operation did materially increase cost.

2. *Cost of subsequent injuries that occur in consequence of the excitement or weakened morale produced by the original accident.* It is certainly true that one accident may produce others, but this is a matter of concern in accident cause analysis rather than in cost analysis. The same cost should not be counted twice.

3. *Cost due to loss of profit on the injured employee's productivity, and on idle machines.* This cost item is invalid unless the accident causes a net reduction in total sales over a considerable period of time. Even in such cases, the cost should not be calculated on the basis of a relatively meaningless distribution of profit among production hours of employees and machines. In most cases, limitations of the market or shortages of materials will cause reductions in production which allow a plant to catch up so that the accident is not a factor in reducing total output. This loss of profit item should not be charged to an accident unless all three of the following conditions hold true:

a. Accidents cause a decrease in total output over a considerable period of time.
b. The resultant total output must be lower than management finds it desirable to produce in view of the demand for its product and the average and marginal costs of production.
c. This resultant total output must be enough lower to cause a reduction in sales due to inability to supply goods.

One example of a case in which a charge could be made would be that of a construction contractor who has accidents which require the spending of an extra three weeks on a given job. If this reduces the number of contracts he is able to accept in the year (and if he could have gotten those contracts), then there is a demonstrable loss of profit which can be charged to the accident. But if he

—To page 82

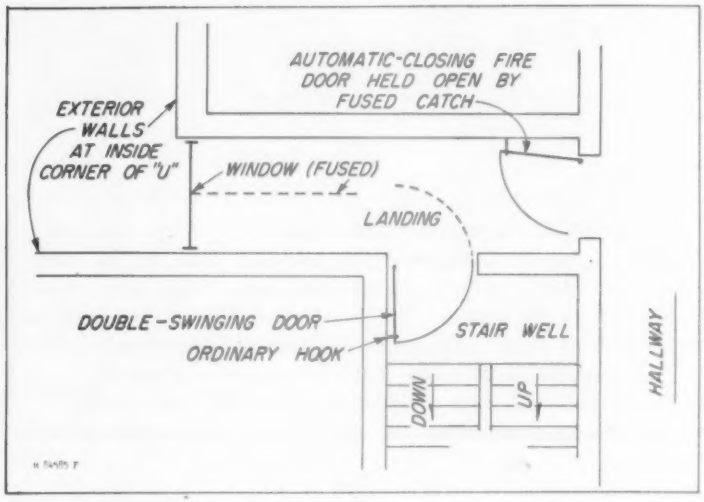


Figure 1. Plan of doors and windows at stair well landings, Forest Products Laboratory, Madison, Wisconsin.

Safer Stair Wells

By. S. M. MUNSON

STAIR wells in the main building of the U. S. Forest Products Laboratory at Madison, Wisconsin, were intended to function as emergency exits in case fire or heavy smoke made the building unsafe for occupancy. As originally designed, however, they had serious defects. How they were made safer is shown in the accompanying illustrations.

The main building is a five-story structure, built in the form of a rectangular U, with full-height stair wells at the two inside corners of the U.

The stair wells are entered from landings on each floor that connect the hallways to them, as shown in Figure 1. The landings also have outside fused windows designed to open automatically at 160° F. to provide air should the stair well become filled with smoke. Hallways and landings are separable by fire doors that were customarily kept open while double-swinging doors separated the landings from the stair wells as a fire and smoke barrier.

These swinging doors, in addition to being a hazard to persons approaching both sides at the same time, prevented gravity ventilation of the stair wells. Moreover, they offered only a false sense of protection from fire or hot smoke, which would be accompanied by a draft heavy enough to open the doors sufficiently to pass dangerous amounts of hot gases into the stair wells and to the other floors.

It was desired to make the stair wells safer as emergency exits and to utilize them for gravity ventilation, while eliminating the swinging door hazard. These purposes were accomplished by hooking open the double-swinging stair-well doors and fitting the manually operated hallway fire doors with a fused catch and an automatic closer designed to close the door tightly as soon as hot gases or flame melted a fusible link controlling the catch.

S. M. MUNSON is Engineer, Forest Products Laboratory, Forest Service, U. S. Department of Agriculture. The Laboratory is maintained at Madison, Wis., in cooperation with the University of Wisconsin.

Figure 2. General arrangement of fused catch and mechanism for automatically closing fire door. It consists of (1) stationary bracket fastened to wall; (2) movable spring-loaded arm that normally holds door open; (3) weight attached to fusible link; (4) fusible link; (5) flexible cable connecting link and weight; (6) stop on cable which depresses spring-loaded arm and releases door for automatic closing; (7) Copper tubing which contains cable to prevent cable whip when catch operates. Catch may be operated manually by pulling on ring (8) which is attached to spring-loaded arm by a second cable (9) that moves independently of the fusible link system.

NSC PROFILES

BOYD D. LEWIS

EDITOR'S NOTE: *Previous profiles of Council officers have been formal and impersonally factual. We make no apologies for this change of style. It is the product of that most combustible of situations—the rubbing together of two newspapermen. The author of this profile is the National Safety Council's Director of Public Information, a reformed city editor. His subject is a completely unrepentant journalist and, as indicated by the free play of ribbing, an old and very good friend.*

I have been asked to write a personality sketch for the National Safety News on Mr. Boyd D. Lewis, the Vice President for Public Information of the National Safety Council.

This is unfortunate for Mr. Lewis, who unquestionably is a man of considerable importance, is good to his family and hits a long ball in the journalistic league. Such a dignitary might well be approached biographically with deference, dignity and even a slight squidge of awe.

But I have known Boyd Lewis too long and too well to approach him in any such fashion. In fact, if I were a little smarter I would not approach him at all—at least not on the tennis court.

It has been my lot to face Mr. Lewis across the office desk, the conference table, the dinner table, the Coca-Cola bar and the tennis net. In all but the last locale the experience invariably has been pleasant. In the interest of accuracy, on which Mr. Lewis is a demon doter, it must be recorded that on the tennis court he is a character who regrettably puts victory ahead of friendship or compassion. He plays to win, and usually does. To make it even more repugnant, he plays fairly.

Boyd D. Lewis

Boyd Lewis can do nothing by halves. He works hard, plays hard, thinks hard and swings hard. He is never non-committal. Ask him a question and you get an answer you can understand. The fact that it is given straight and with no punches pulled is sometimes disconcerting but always helpful.

Mr. Lewis is Vice President and Executive Editor of the Newspaper Enterprise Association, which is known to the trade as NEA Service. This segment of the busy Lewis life may be news to some of his associates at NEA, who understandably are inclined at times to suspect he really is working for the National Safety Council. But along with helping to prevent accidents and performing other public services, he contrives somehow to manage the operational control of the world's oldest and largest newspaper feature service, plus Acme Newspictures, a worldwide system of leased wires and telephoto machines covering news in pictorial form. And he contrives to do it well.

Boyd Lewis was born in Boston in 1905 in a well-lighted operating room and has been consistently unable to stay out of the spotlight ever since. He attended Boston University, then went to work in the Boston bureau of the United Press. After covering such intriguing episodes as the S-4 disaster and the Sacco-Vanzetti case, he was appointed bureau manager of the United Press for the state of Connecticut at the ripe old age of 21. He was cable editor for UP during the Ethiopian war and then served as Central Division News Editor in the UP's Chicago offices.

It was in Chicago that Boyd Lewis, working just across the river from headquarters of the National Safety Council, became exposed to safety and took to it like a hot rod to the ditch. The National Safety Council dolefully went into mourning when he was moved away from Chicago to run the UP war desk in New York when World War II got really rolling. From there he went to London to manage the UP bureau there, dutifully stayed put three weeks and then wangled a short visit to the war front—an assignment which, by adroit manipulation, he stretched to nine months, ending with coverage of the German surrender. He was one of three U. S. press representatives selected for this assignment.

He then returned to his London assignment, but had trouble with his h's and returned to the U. S. by plane in June, 1945, to become NEA's executive editor. He later was promoted to membership on the board of directors and to the vice-presidency.

Boyd Lewis is a hard-hitting, fast-swinging newspaperman who knows all the angles. He is sincerely interested in safety and even practices what he preaches by driving his car circumspectly—a habit his wife claims has on occasion made them late to weddings and other affairs where punctuality is regarded as conventional.

It is generally agreed that safety has a good story to tell, but that the story is apt to get a little stuffy. Boyd Lewis is a great help in unstuffing it.

Paul Jones

Optical dispensing room of Occupational Vision Section at Oak Ridge National Laboratory. The dispenser may use any of the facilities without leaving his seat at the fitting table.

The Health Division takes over

EYE SAFETY

By JAMES R. RULE

Results were good under the safety department; They have been even better under medical supervision

FOR the past eighteen months the administration of an eye safety program has been a responsibility of the Health Division of the Oak Ridge National Laboratory. Since the first day of operation under the Health Division, the advantages of such an organizational plan have been increasingly apparent.

From its inception, the X-10 plant at Oak Ridge, now known as the Oak Ridge National Laboratory, has maintained a program of vision protection for workers. The plant has been under the direct operating policy of several contractors since construction was begun but each contractor has recognized the importance of safeguarding vision.

The major item of the program, of course, has been safety glasses. At first, the glasses were issued through the plant dispensary. A nurse handed them out to the employee on receipt of an authorizing note from his supervisor. Little or no adjusting was attempted. As might be expected, there were numerous complaints of ill-fitting glasses. It was decided that the program should be expanded and provisions were made for correct fitting.

After some study, responsibility for issuance of safety glasses was given to the plant safety department, and an experienced dispenser was employed. Improvements were rapid and eye injuries dropped. The program continued under the supervision of the safety department for several years and broadened in scope as the work of the Laboratory expanded. However, it was felt that many improvements could be made.

In the summer of 1948 several Laboratory division directors met to discuss ways of increasing the effectiveness of the program. As a result of this conference, eye protection became the responsibility of the Health Division. It was concluded that such a move would place the program in more professional surroundings, and that other benefits would accrue through medical staff supervision.

The educational efforts of the Health Division are first encountered in the orientation program. Each Friday morning all those who have been accepted for employment during the week attend an informal meeting planned to assist them in becoming adjusted to their new working environment. An explanation of the occupational vision service is given at this meeting. The program is

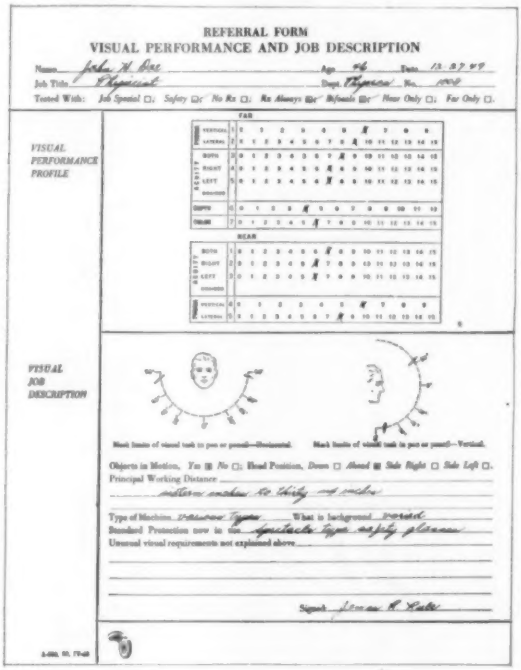
JAMES R. RULE is on the staff of the Health Division, Oak Ridge National Laboratory, Oak Ridge, Tenn. The program described in this article has been carried out under the auspices of the Atomic Energy Project and under the supervision of Jean Spencer Felton, M. D., medical director, Oak Ridge National Laboratory.

Prescription card and individual record of issue of safety glasses to employee. On the front of the card is the prescription and other details. On the reverse side are the data obtained from two screening tests about three months apart.

described and procedures for obtaining safety spectacles and facilities for their maintenance are outlined.

Since not all work within the Laboratory is eye-hazardous, the employee is informed by his supervisor whether his particular job will involve these dangers. Some jobs may take an employee to hazardous areas only occasionally but protection must be provided for him. Some areas are zoned off as hazardous and no one is permitted to enter them without eye protection.

Issuance of eye safety equipment must be authorized by a responsible person in the employee's department, usually his supervisor. A list of authorized signatures is retained by each department. The cost of material is charged to the department's budget, hence the authorization requirement. Its purpose is to keep expenditures on a systematic basis, not to deny protection to those who need it.



Referral form used when referring employee to specialist for professional eye care. It contains both the visual performance profile as determined by preliminary tests and details of the job which would be essential in prescribing the correction.

When the employee presents his signed request for safety glasses, it is determined whether he requires corrective lenses or whether plano goggles will be adequate. Corrective lenses can be obtained within seven or eight days. Plano safety glasses can be fitted immediately.

Each pair of prescription spectacles is examined by the ophthalmic dispenser and fitted carefully to the wearer. Forms are signed by the employee and forwarded to the appropriate departments. Maintenance and service are always available.

Important in the management of any office, of course, are accurate records. By careful planning, the amount of space needed for these papers was held to a minimum. The nucleus of the record system was an alphabetical card file. The 4 x 6 card contains ample room for the employee's name, badge number, department or division, and job classification, Each visit is recorded on this card, and the service performed is noted.

—To page 82

Tools for Manual Handling of Pulpwood and Logs

Published by National Safety Council
425 North Michigan Ave., Chicago 11

1. It is generally believed that tools used in manual handling of logs and pulpwood are the source of many injuries. However, there is little statistical information on the subject.

2. In a report on pulpwood logging accidents[1] the United States Department of Labor states that the pulp hook was involved in 6.3 per cent of 1,933 disabling injuries studied. One per cent involved the cant hook or the peavey. Of 472 cases which involved hand tools, the pulp hook, cant hook, and peavey accounted for 140 disabling injuries—about one-third of the total.

3. None of the cases reported was a permanent partial disability; all were temporary total cases. Injuries suffered in the use of a cant hook or peavey resulted in an average time loss of 22 days, whereas in the case of pulp hooks the average time loss was 15 days.

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes; federal laws; insurance requirements; state laws, rules and regulations; and municipal ordinances. Reprints of all Data Sheets are obtainable from National Safety Council.

4. A report of the Ontario Pulp and Paper Makers' Safety Association shows that from 1938 to 1947 hooks were involved in 5.4 per cent of the total number of injuries from hand tools used in woods operation.[2]

5. An analysis of 2,000 accidents sustained by six pulp mills in the South showed that 215 (approximately 10 per cent) involved wood hooks.[3]

6. A study by the Michigan College of Mining and Technology concluded that cant hooks were involved in 1.9 per cent and picaroons in 1.2 per cent of 1,000 woods accidents.[4]

7. In another report, of 340 injuries involving tools or equipment (not limited to logging or pulpwood handling), the agency in 64 cases was the picaroon, in 12 cases the pulp hook, and in 8 cases the pike pole.[5]

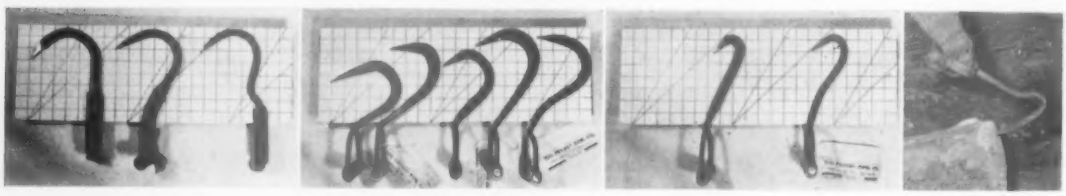
TABLE I
Summary of Accidents Involving Pulp Hook (Wood Hook)[2]

	Significant Factors							
	Tool missed	*Tool glanced or bounced off*			*Tool pulled loose or slipped out of*			*Total*
		Knot	*Ice*	*Not stated*	*Ice*	*Bark*	*Not stated*	
Loading (4 unloading)	7	4	5	8	1	—	24	49
Piling (2 unpiling)	4	1	2	3	—	1	9	20
Lifting	—	—	—	—	—	—	1	1
Not otherwise classified	1	—	1	1	—	—	2	5
	12	5	8	12	1	1	36	75

Wood Hooks

8. From these statistics it appears that wood hooks are the principal source of injury, at least from the standpoint of number, in comparison with other manual tools for handling logs. Cause information is meager but provides

Figure 1. Wood hooks are made in a variety of shapes. (First three pictures courtesy R. W. Laughlin; picture at right courtesy West Virginia Pulp and Paper Company).



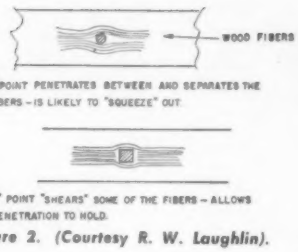

WOOD FIBERS
"NEEDLE" POINT PENETRATES BETWEEN AND SEPARATES THE WOOD FIBERS – IS LIKELY TO "SQUEEZE" OUT.
"SQUARE" POINT "SHEARS" SOME OF THE FIBERS – ALLOWS HOOK PENETRATION TO HOLD.

Figure 2. (Courtesy R. W. Laughlin).

some clues, as Table I and II indicate.

9. *Design.* The hypothesis that the hook design is a major factor in hook injuries has been studied by two investigators, Williams[3] and Laughlin.[5] Both imply that there are factors much more important than hook design and that, in fact, there is little evidence for considering design the most significant factor in hook injuries. A study of the tables suggests that hook injuries may be traced to some fault in the method of using the tool. This opinion is also held by the representative of a logging association who stresses the importance of close, daily supervision by the foreman.

10. Laughlin states that changing the angle of the hook point with respect to the straight portion of the handle has little effect because the worker simply alters his method by using the hook to adjust for the change in design.

11. However, he continues, a hook which can be set in the work by a simple downstroke (without any pull to imbed the hook point) is probably easier and safer to use than one which requires a more complex movement of the arms and hands. (See Figure 1.) Furthermore, the design should permit the hook to be set in a log without injury to the knuckles of the gripping hand.

12. Williams reports, "The type of hook does not appear to have much bearing on the problem of wood hook injuries." Many logging supervisors express disagreement; and since there is a lack of substantial factual data, the question remains controversial. All agree, however, that proper maintenance does have a definite bearing on the problem. For instance, a dull point requires a harder striking blow, which may contribute to inaccuracy of aim and thus result in injury.

13. There is some agreement that the kind of hook point has an influence on safe use of the hook, but there is difference of opinion

TABLE II

Summary of 215 Wood Hook Injuries[3]

Number of cases	*Probable Immediate Cause*
154	Hook slipped or glanced off log.
25	Hook missed log.
8	Hook pulled out of wood.
28	Hook fell, was dropped, or other man using hook struck injured employee.

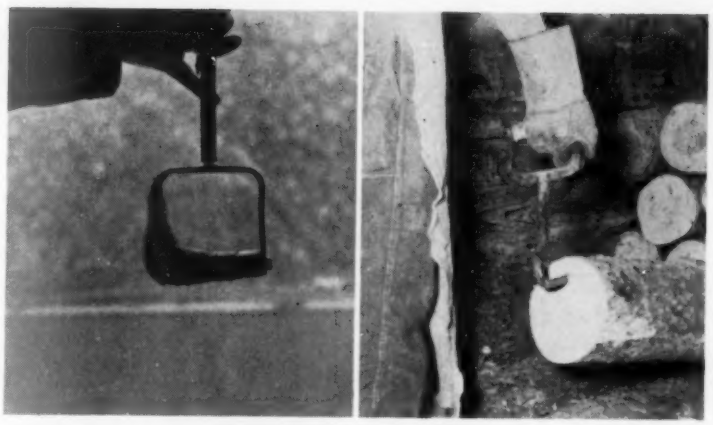


Figure 3. Left, a handle padded for a right-handed worker. Right, method of gripping a padded hook. (Courtesy West Virginia Pulp and Paper Company).

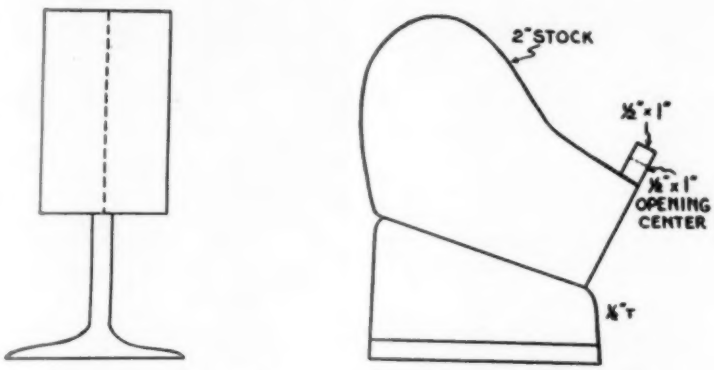


Figure 4. A template for shaping wood hooks. (Courtesy G. F. Williams).

Figure 5. Limit of re-sharpening wood hook points. (Courtesy G. F. Williams).

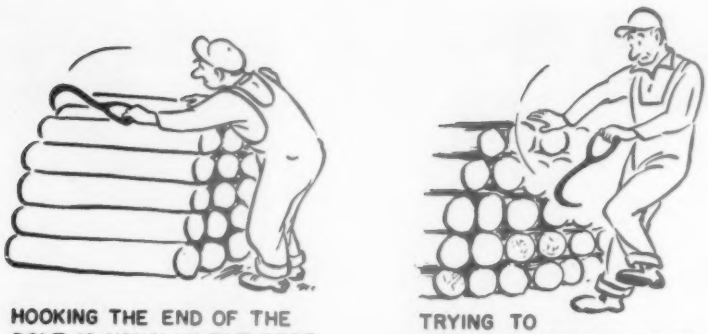


Figure 6. (From Northeastern Loggers' Handbook).

concerning the best shape of the point. Laughlin reports that a hook ending in a 1/16-inch square having sharp edges offers a more secure hold on the log than does a hook ending in a sharp point.

14. This opinion is based on the assertion that a sharp point penetrates between the wood fibers, separates them, and in so doing compresses them. Since the fibers are inclined to return to their original position, there is some tendency for the hook to "squeeze" out.

15. On the other hand, a sharp-edged square point tends to shear some of the fibers as it is driven into the log. Consequently, it is said, this type of hook holds better. (See Figure 2.)

16. Williams recommends a wood hook point having a triangular cross section because such a point has a wedging action which tends to set the hook more securely. When the triangle is made so that one edge is in the same plane as the shank, a wedging action upward is produced by a log bearing down on the point (as when the hook is used to lift or carry a log).

17. Regardless of the shape of the wood hook, it is agreed that the tool must be made of good grade steel correctly tempered. For a comfortable fit and to prevent the hand from slipping, the handle should be oval or D-shaped in cross-section. (See Figure 1.)

Figure 7. Combination shin, knee and foot protection. (Courtesy Flintkote Co.)

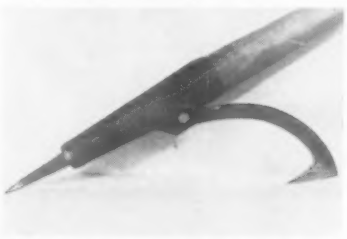


Figure 8. Correct relationship between pick and hook of peavey. (R. W. Laughlin).

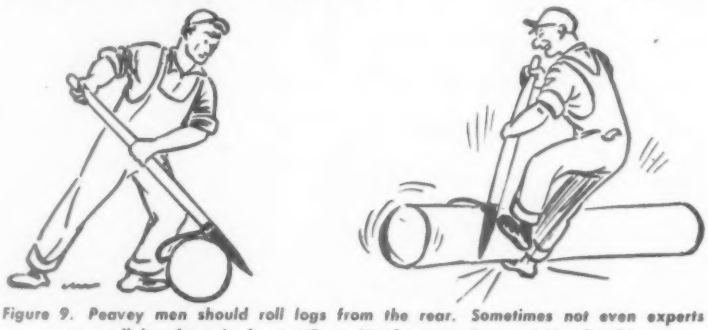


Figure 9. Peavey men should roll logs from the rear. Sometimes not even experts can roll log from in front. (From Northeastern Loggers' Handbook).

A round section handle is more likely to turn in the hand. In all cases, the handle should be locked to the frame to prevent it from rotating.

18. A unique handle is in use at a Southern mill.[8] Felt is wound around the handle so as to fill in one corner. Then a covering of friction tape is applied. (See Figure 3.) The company reports a marked reduction in hook injuires since this tool has been in use.

19. Success of this hook may be attributed to the increased control which it gives. Since the hand grips both the handle and the side of the yoke, the user has rigid control of hook motion. With the conventional grip, control of motion depends partly upon friction between the palm and the handle.

20. *Condition.* Of all the mechanical factors, probably the most important is the condition of the hook. Use of a template is recommended to help maintain the hook in the correct shape and to assure uniformity. (See Figure 4.) Then a worker who gets a new hook or temporarily uses that of a fellow worker will not need to make any change in method, but will be able to swing it exactly as he does his own hook.

21. A template will help to keep the handle of the hook square with the shank of the hook. This point is important since a hook having a handle not square with the shank strikes to one side of

—*To page 72*

CAUSE AND CURE

These examples are from reports of actual accidents. They list the causes and the steps taken to prevent recurrence

Tank Upset

Driver backed his truck into supporting timbers of 10,000-gallon water tank, causing it to topple onto truck and other property, with heavy loss.

Correction: All drivers were warned to gauge clearances carefully when backing, and to enlist aid of spotter when safety of workers and property might be involved.

Hot Bath

Mechanic removed radiator cap of overheated engine of pumping unit and steam and hot water gushed out in his face, causing severe burns.

Correction: Workers were instructed to (a) wait until boiling stops; (b) protect hand with pad; (c) stand at arm's length, and (d) release cap slowly, allowing steam to escape.

'Trouble' Light

Employee in gas plant was using extension light in excavation when splash of water exploded hot bulb, igniting accumulated gas and causing severe burns.

Correction: All trouble lights in plant were replaced with vapor-proof fixtures and, as an added precaution, were equipped with transformers to use low-voltage bulbs.

Gasoline Blast

Three workers were killed in the hold of a ship when one of the trio lit a cigarette near open drum of gasoline, with which his hands were soaked.

Correction: Strict enforcement of "No Smoking" rules on shipboard was ordered, and crew members were prohibited from using gasoline for cleaning purposes.

Pinch Point

Pipefitter's helper was holding flanged elbow of 10-inch pipeline as it was disconnected. When released, the elbow dropped, mashing his finger.

Correction: Workers were instructed to make certain all parts of line are properly supported before line is broken, and to keep their fingers clear of pinch points.

Off-Beat

Worker sliding concrete blocks to edge of truck allowed one to slip over edge on leg of co-worker who had stopped to pick up block that had fallen.

Correction: Injured worker was told that when fallen block interrupted even rhythm of his motions in stacking them, he should have warned worker on truck to slow up.

Put Housekeeping in the Bid

By S. D. WEBB

To protect the public, the superintendent, the employee, and the company's prestige and finances, the cost of housekeeping measures should be included

WHEN making a bid, what consideration should be given to housekeeping?

Especially essential is the preliminary layout covering buildings or shanties, roads, pathways, railroad sidings, and material storage. In addition, careful attention must be given to equipment storage, parking, drainage, water for drinking, fire fighting equipment, and to furnishing enough personnel properly trained to maintain good housekeeping.

Roads should be planned with sufficient turnouts. Paths should be laid out to save steps which mean time and money. Proper and adequate drainage should be provided. Without it a job can be tied up in foul weather.

Equipment storage facilities should be large enough for all contemplated equipment, parts and service. Parking requirements should be studied, and arrangements made for contemplated peak employment. Railroad sidings should have unloading facilities for track or trailer trucks, if necessary.

Material storage is, of course, governed entirely by the size and nature of the contract. The important point to remember is that the use of large tractor trailer trucks and the quick turnover of material may require more truckage area than ordinarily would be required. A bottleneck here would be expensive.

Water supply for drinking and fire protection is important. Drinking water should be tested, or should come from an approved source. Water for fire purposes or equipment should be located so the supply will not be affected by weather or traffic.

Fire equipment follows job requirements but a good "rule-of-thumb" is to install a portable extinguisher outside each building near a door. This makes it available for use on any building on the site. It is desirable also to have additional extinguishers of the proper type and properly identified inside buildings. Each structure should be equipped with at

S. D. WEBB is Field Safety Supervisor, Contracting Division, Dravo Corporation, Pittsburgh, Pa.

Storage yard of Drave Corp. at site of new highway bridge across Monongahela River near Belle Vernon, Pa. Orderly storage of materials and adequate facilities for traffic are needed for safe and economical operation.

least one for electrical fires and one for material fires. Placing fire extinguishers in correct locations has made fire an incident instead of a disaster or a work stoppage on many jobs.

Personnel must be trained in good housekeeping procedure. An organization, whether it consists of one man or twenty, should be instructed in its duties, taught the best way to keep paths and walkways clean, buildings and toilets in order; how to clean and handle used material, and the right equipment to use.

If these items are not considered in the planning, poor housekeeping may result, and poor housekeeping is costly. It causes lost time and money from routing materials or vehicles on circuitous or narrow routes, personnel climbing over obstructions, handling materials, accidents, fires, low morale and public disapproval and ill will.

Roadways form the bloodstream of a job. They should be as short as possible and kept open and clear. Paths should be defined, barricaded if necessary and kept clean. Production time is lost in efforts of workmen climbing over a 12″ x 12″, an H beam or a piece of equipment set down for "just a moment" and left for days. Certainly, it could have been placed off the path but ideas like this have to be sold to the crew and then enforced.

The cost of handling material is directly affected by poor housekeeping or lack of space. Costs mount when equipment and manpower are not utilized properly. Men standing around waiting to unload or load material are a hidden cost.

In heavy construction it takes about twice the storage space for used material as it does for new material. Unless plans are made to handle and store material economically. This can be accomplished through training and supervision.

Properly trained laborers or carpenter helpers will clean lumber very fast. Training should consist of the proper use of tools, including heavy ripping hammer; 8-pound sledge; large and small pinch bars, and oak wedges. Laying out bases to receive lumber of different sizes and lengths, with sufficient clearance for loading, must receive consideration. Supervisors must insist that the working area be kept clear and that workers wear shoes with good soles and safety toes. Instruction on leverage is important. Knowledge of the location and proper use of fire extinguishers is essential.

Superintendent's Responsibility

Housekeeping on any job is the responsibility of the superintendent. The pay line in most heavy construction jobs will be excavation or concreting. Attempts are constantly being made to break previous records and reduce costs. This is commendable but too often a superintendent, when questioned about the housekeeping conditions, will explain, "well, we were too busy concreting to pay attention to it."

Housekeeping is an over-all job. All foremen and subcontractors should be impressed with the fact they are responsible for their areas and must keep them free of debris resulting from their work. It should be emphasized that material or equipment left by them in aisles and walkways, causing hazards and inconvenience to other workmen, can be paid off by another gang or another craft and that they and their work would in turn suffer. Where this has been stressed at the start of a job, a spirit of cooperation results.

Sometimes jobs start out with a clean-up gang assigned but, because they are not properly supervised or utilized, they are shifted to other "more important" jobs. What happens? Debris piles up, shanties get in bad shape, washrooms or change houses are neglected, morale drops and, of course, accidents start to mount. Thitry-six per cent or more of con-

—*To page 86*

the LIGHTER SIDE
by SID HIX
MAKESHIFT PROTECTIVE EQUIPMENT IS DANGEROUS!
NOT WATCHING WHERE YOU PLACE YOUR FEET CAN LEAD TO TROUBLE!

"Stickmen" with Three-Dimensions

Simple dioramas prepared with dime-store materials add variety to bulletin board displays

Mary A. Bair, R. N.

LOOKING for something different—and economical—for safety bulletin board displays? This may be it.

The illustrations show what can be done in getting across safety ideas with pipe cleaners and cardboard, supplemented with a few miniature stage props from the ten-cent store. You don't have to be an artist to prepare these displays but it helps, of course.

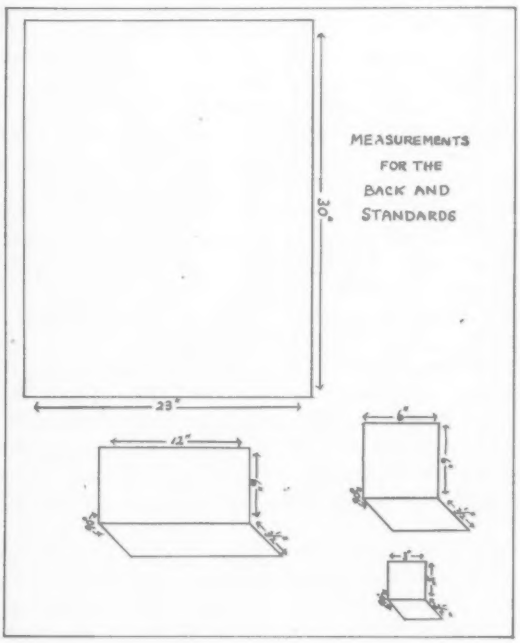
The examples shown are the work of an industrial nurse, Miss Mary A. Bair, R. N., who is employed by The Union Metal Manufacturing Company, Canton, Ohio. To date, Miss Bair has produced more than 45 of these dioramas covering a variety of safety subjects.

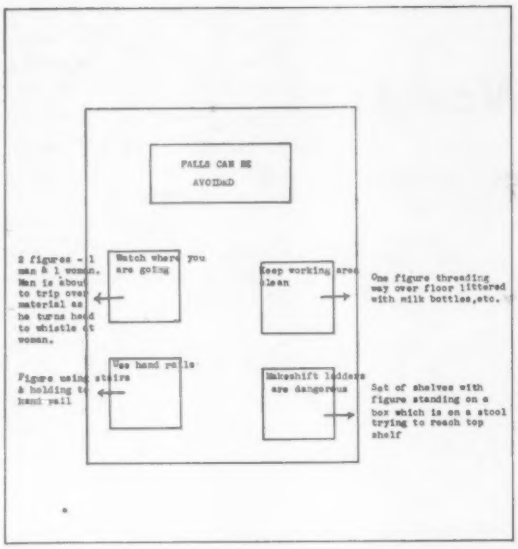
The technique of these displays is somewhat similar to the use of stickmen. These little figures with circles for heads and straight lines for other parts of the body can be used to illustrate any scene in which human beings appear, as in depicting an accident. Acceptable stickmen can be drawn by persons with little or no training or drawing ability but, of course, an experienced artist can put much more expression and action into these simple figures.

In Miss Bair's dioramas, stickmen with a third dimension are made of pipe cleaners and their effectiveness is increased accordingly. For the stage properties of the various scenes, miniature fur-

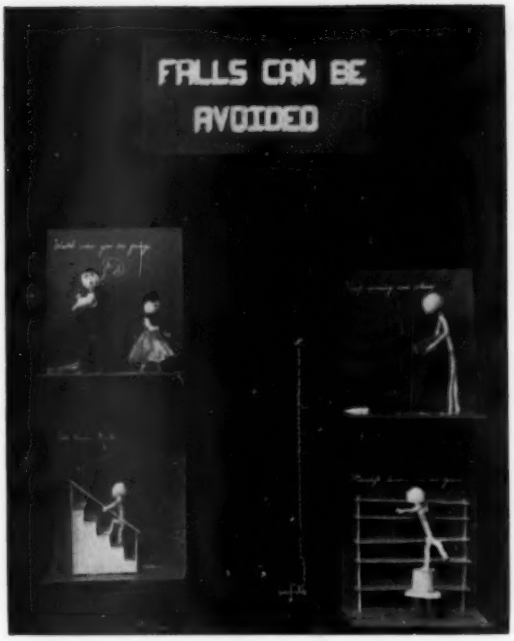
One of the portable safety dioramas in an enclosed bulletin board. Pipe cleaners of assorted colors are the "actors."

Measurements for back and standards. Back is made of aluminum covered with black felt which makes good background for the displays.




FALLS CAN BE AVOIDED
Watch where you are going
Keep working area clean
One figure threading way over floor littered with milk bottles,etc.
Use hand rails
Makeshift ladders are dangerous
Set of shelves with figure standing on a box which is on a stool trying to reach top shelf

Preliminary layout and scenario for the finished display shown at the right. More than 45 of these have been produced.



niture, tools and vehicles made of plastic can often be obtained from the ten-cent store. Other items can be fashioned from wood or cardboard. The results will depend largely on the skill and ingenuity of the designer in dramatizing ideas with simple materials.

This series of three-dimensional displays, says Miss Bair, was developed by the trial and error method. The first attempts used a bulletin board for the back and standards of cardboard were anchored to it with thumbtacks. These were none too successful and Miss Bair asked one of the foreman, M. E. Stickle, to make some standards of aluminum. This made it much easier to arrange the displays but the standards proved too heavy for the thumbtacks.

Mr. Stickle then suggested using a sheet of aluminum for the back and drilling holes at various points where the standards could be held in place with screws. This equipment is now used and has proved quite satisfactory. An attached diagram shows the dimensions of the various parts.

The aluminum sheet has been covered with black felt which makes a good background for a wide range of colors. Art paper is used to cover the standards and for the headings.

One of the accompanying sketches shows the preliminary layout and scenario for a diorama. At the top is the panel containing the heading, and a brief description of the scene to be portrayed on each of the standards. The inscription may be a slogan or the injured man's account of how the accident happened. A photograph shows the finished display.

The dioramas are changed every two or three weeks and can be moved to different locations. Many employees will go out of their way to see the new display and comment freely on the subject matter.

The dioramas prepared during the past 2½ years have covered a wide range of subjects. Unsafe work practices, inherent hazards of industrial operations, actual accidents, and expositions of safety principles have provided the themes.

Miss Bair, who has been with the Union Metal Manufacturing Company for the past eight years, is a graduate of the Aultman Hospital School of Nursing in Canton, and has taken post-graduate work in psychiatry at St. Elizabeth's Hospital, Washington, D. C. She has been active in the Ohio State Nurses Association and has served as vice-chairman and secretary of the Industrial Section. Her services to the company and its employees have extended far beyond her professional duties and her contributions to the safety program have been numerous and valuable.

Prizes Offered for Fire Protection Ideas

Prizes totaling $1000 are offered by Dunham & Bates, insurance agents of Portland, Ore., for the best description of methods to provide ventilation to reduce fire and smoke losses from basement fires in mercantile stores. The contest will be conducted through the National Fire Protection Association.

First prize is $500; second prize, $250; third prize, $100, and three honorable mention prizes of $50 each.

The contest is open to all except the judges, NFPA staff, and employees of the donors. Information and rules are available from the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Mass. The contest closes November 1, 1950.

Industrial Safety Throughout the World

The Law and Practice Relating to Safety in Factories. Published by the International Labour Office, Montreal, Canada. Available in the U. S. from Washington Branch, I.L.O., 1825 Jefferson Place, N. W., Washington 6, D. C. 1701 pages; index; price $8.50.

Since its organization following World War I, the International Labour Office has been carrying on important work on behalf of accident prevention and occupational hygiene throughout the world. The results of many important studies have been made available through its publications.

One of the projects which the office has had in mind for many years has been the preparation of a model code of safety regulations for factories. A resolution to start work on the preparation of such a code as soon as circumstances permitted was adopted at the second conference of American states members of the I.L.O. at Havana in November 1939.

The importance of approved international safety standards has been intensified by events during and since World War II. There has been considerable industrial expansion in many countries outside of Europe and, on the other hand, the large scale destruction of industrial plant equipment in the war zones is likely to be followed by far-reaching building programs. It would thus be a great advantage if international health and safety standards could be formulated before the expansion and rebuilding programs get under way in the various countries.

The report contained in this volume is aimed at providing both a general survey of the industrial safety movement as a whole and an analysis of industrial safety legislation.

The promotion of industrial safety, it is pointed out in the preface, requires a collaboration of very many agencies, including legislatures, inspectorates, educational, scientific, insurance and propaganda institutions, and last but not least, the employers and workers themselves.

The contributions that these various bodies may make to factory safety have been explained in the report. The organization and statutory functions of factory inspectorates have been described in a previous report "The Organization of Labor Inspection in Industrial and Commercial Undertakings." In the present report, information concerning inspectorates is almost entirely confined to their voluntary activities.

A report embracing all the countries in the world was not practicable with available facilities. Moreover, wartime conditions made the collection of materials from some countries difficult, if not impossible. The report, therefore, gives a representative account of safety activities and legislation in some of the more highly industrialized countries.

In the general introduction, the development of safety legislation and the more recent development of safety movements are sketched briefly from the beginning to the present. Some accident statistics for various countries are given but these are not recent enough to be of much practical use. Even for the United States and Great Britain, the records do not extend beyond 1944. However, they do permit some interesting comparisons between countries for the periods mentioned, also analyses of the principal accident cause groups which are fairly constant.

Part I is devoted to national and international organizations. Chapters deal with the government and voluntary associations in Canada, Chile, Czechoslovakia, France, Germany, Great Britain, India, Mexico, Netherlands, New Zealand, South Africa, Sweden, United States and the Union of Soviet Socialist Republics.

The monographs on Czechoslovakia and Germany are admittedly incomplete and it has not been possible to obtain much information about the U.S.S.R. This, the report points out, is particularly unfortunate, since the Russian system of safety organization is unique.

Safety in the USSR

Under Soviet rule, both executive and legislative bodies are organs of the state. Strictly speaking, there are no unofficial safety movements or unofficial safety codes. However, there is a very highly developed and active safety program directed by the state, notably through the union, republic, province, district and municipal factory inspectorates, as well as through the factory safety organizations themselves.

Fundamental principles of labor protection are embodied in the labor codes of the federated republics. Some codes of highly technical regulations, such as those for boilers and steam plants, electricity and lifts, have been issued by the industrial commissariat. The state usually allots large sums for labor protection and safety engineering.

The Labor Protection Department of the Central Council of Trade Unions deals with questions of safety engineering through affiliated unions. It draws up and submits for government consideration bills amending existing labor laws. It supervises labor protection departments of various unions and approves rules and regulations concerning labor protection. It directs activities of the Central Council's Labor Protection Research Institutes. The Council has a Labor Protection Museum at Moscow.

Labor inspection is a trade union function and is organized industry by industry. Technical inspectors have broad powers. In the case of deliberate violation of

labor laws, they take proceedings against guilty parties. They register accidents, study their causes, help managements find ways to prevent them. Only trained specialists are appointed inspectors.

There are several research institutes and a considerable volume of safety literature has been issued. Accident prevention and industrial hygiene are taught in institutions for higher technical education, and every factory of any size has its own trade school which gives technical instruction, including safety.

In individual factories, safety organization is compulsory. Safety regulations must be included in the collective agreement for the factory, and a factory committee representing the workers must appoint a labor protection commission and the public labor inspector for the factory. In addition, a special inspector must be chosen by the juveniles in the factory to look after their interests.

On the international scale, organization and machinery for the prevention of industrial accidents are still in their infancy. The Industrial Safety Section of the International Labour Office might be considered an embryo of an international safety organization. The Statistical Section of the Office has also contributed toward international standardization and development of accident statistics.

One or two other international bodies have concerned themselves, more or less incidentally, with particular branches of safety, such as safety films, fire fighting, and welding. There have also been international conferences of factory inspectors, directors of safety museums, and voluntary safety associations. Regional cooperation in industrial safety is almost entirely confined to Europe and America but is not highly developed in either continent. The International Labour Organization is the only official international body which attempts to cover the whole field of industrial safety. An outline of its organization and ac-

—*To page 87*

The SAFETY VALVE

Other folks are stubborn, we're merely firm. — THE HOUGHTON LINE.

Lincoln Never Said It

More words of wisdom and near wisdom have been attributed to Lincoln than to Confucius. There is scarcely a situation of the present or the past on which he has not been quoted or misquoted. The anthology of Lincolnisms has been growing for 85 years and most of them are phony.

Writing in *Harper's* for May, Albert A. Waldman quotes freely from the Lincoln lore. Unlike many public men today, Lincoln never had a ghost writer. But ever since his assassination, self-appointed ghosts by the score have been turning out aphorisms alleged to have been authored by him.

Some of Lincoln's messages have been revised to suit modern purposes and others have been made to order. Some of them would indicate prophetic gifts that were positively amazing. His alleged words have been quoted to prove or disprove every political, economic and social issue of the times.

Some wise observations on accidents are even attributed to Lincoln. Several years ago the NEWS carried on the editorial masthead this aprocryphal statement said to have been made in an address at Princeton, Illinois, in 1856:

"It is the duty of every man to protect himself and those associated with him from accidents which may result in injury or death."

It was included at the suggestion of a prominent member who belonged to the vast army of Lincoln fans and 23 years ago the editors were much more credulous.

If Lincoln had actually said it, he would have been fifty years ahead of his time. In the middle of the last century accidents were quite generally accepted as "acts of God."

Fore!

Ever since the world borrowed golf from the Scots, the people who make sporting goods have been trying to help dubs cut down the distance between their score and par. They brought out the center-shafted putter. They offer clubs with handles flattened so you get the right grip automatically. And one manufacturer put a blister on the toes of the irons so that, theoretically, you couldn't help hitting the ball a solid smack.

At times I have used fancy clubs borrowed from low-handicap friends instead of my mismated brassie and spoon and five mongrel irons. But the ball still circled into the rough; it dived into water holes, and it dribbled down the fairway when topped.

Now, there are rumors of a ball that won't get lost. Little specks of radioactive material under the hide reveal its position in the tall grass. It is located with a Geiger counter which weighs only ten ounces and costs a mere 25 bucks. There is just enough radioactive stuff to excite the counter but not enough to hurt you, the inventor says. But it won't be on the market for some time.

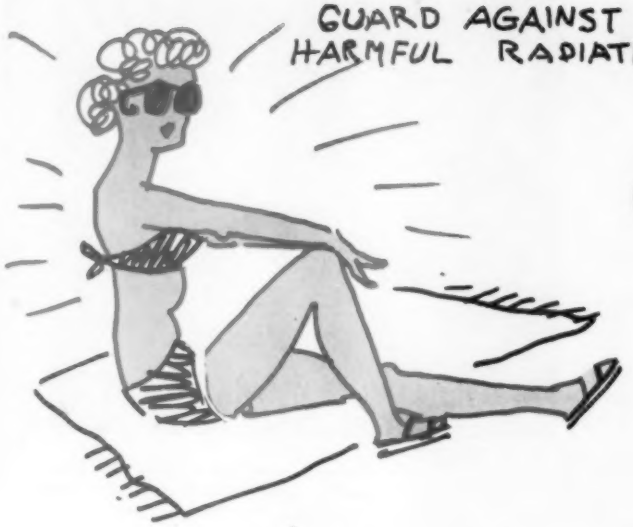
Playing two games a year, with an average of two repaints lost per game, I probably wouldn't live long enough to get back the investment.

But something on the guided missile principle to straighten out a slice would be worth looking into.

Carman Fish

Diary of a Safety Engineer
BY BILL ANDREWS
LIFT WITH BACK
SAFETY ENGINEER
ON VACATION
COMPACT PLANT LAYOUT
BED
TABLE
CRIB
ICE BOX
SINK
STOVE
FIRE PLACE
CUPBOARD
FIRST AID SUPPLIES
WEAR PROTECTIVE CLOTHING

GUARD AGAINST HARMFUL RADIATION



DON'T OPERATE MACHINES YOU DON'T UNDERSTAND

BE CAREFUL WITH MATCHES

FENCE GUARD FOR DYNAMO

SKETCHES BY BENTON

PLEASURE DRIVING?

Never Too Old to Learn

Supervisors with 25 years' attendance get certificates as Milwaukee Foremen's School celebrates 30th anniversary

In recognition of the Milwaukee Foremen's Safety School's thirtieth consecutive year of operation, the Safety Division of the Milwaukee Association of Commerce receives an Award of Merit from the National Safety Council. Tom A. Burke, director of programs for local councils, NSC (left) presents the certificate. Others, left to right, are: Myron E. Jo'lidon, chairman of the Foremen's Safety School; Clarence J. Muth, manager of the Safety Division, and T. N. Moore, chairman of the Safety Division.

←
Supervisors who received certificates for 25 years' attendance at the Milwaukee Foremen's Safety School.

AN unusual and impressive feature of the 30th anniversary of the Milwaukee Foremen's Safety School held at Milwaukee Auditorium on June 7, was the presentation of "diplomas" to 78 men and one woman who had attended the school 25 years or more.

The School was founded in 1920 by the Safety Division of the Association of Commerce and sessions have been held every year since. A total of 10,360 persons, representing 350 industrial and mercantile firms in the Greater Milwaukee area registered for the 1950 meetings.

Three monthly sessions were held with an attendance that averaged in excess of 5,000 persons, more than 4,000 of whom received graduation certificates. Twenty-four speakers addressed the eight occupational groups, which were Electrical and Plant Maintenance, Food and Beverage, Foundry, Machine Shop, Management and Supervisory, Material Handling and Transportation, Metal Trades, and All-Trades.

Industrial bands and choruses were featured at all three sessions, and at the final meeting on June 7, 6,000 supervisors enjoyed a fitting and colorful observance of the school's thirtieth year.

A special "Award of Merit" from the National Safety Council, expressed the appreciation of the national organization for the School's valuable contribution to the safety movement since 1920. The certificate was presented by Tom Burke, director of Programs for Local Safety Councils, NSC.

In order to handle the large registration and set up the smooth-running machinery for the various sessions, the services of 165 personnel and safety directors are required as members of various committees. For the past 20 years the Foremen's School has been under the able direction of Clarence J. Muth, manager of the Safety Division. *—To page 79*

WHAT *Management* SHOULD KNOW about FLOOR-MAINTENANCE MACHINES

The area of a floor, whether it is congested or open, the type of flooring and whether it is easy or hard to clean — these, among other factors, determine the floor-maintenance equipment. For most effectual, economical floor care, choose accordingly.

For large-area floors, a self-propelled combination scrubber-vac is the labor-saving answer. *Finnell's 213-P* applies the cleanser, scrubs, rinses if required, and picks up — all in *one* operation. Has a cleaning capacity up to 8,750 sq. ft. per hour! Vacuum performs quietly.

For buildings with floor areas ranging from 2,000 to 15,000 sq. ft., a *Finnell 418-P Self-Propelled Scrubber-Vac* is a wise choice. Reduces cleaning time approximately two-thirds! Has all the refinements of *Finnell's* larger combination machines. Handles *both* wet and dry work.

For floors in very small establishments, and as supplementary equipment for the specific care of small-area floors in larger buildings, a *713 Finnell* serves advantageously. This 13" all-purpose machine is just 6" high! Polishes, applies wax, wet and dry-scrubs, light-sands, applies seal, steel-wools, and shampoos carpets.

For grease-caked floors, a dry-scrubber with powerful scarifying brushes affords the fastest cleaning method. *Finnell's 84-XR,* with its self-sharpening brushes, cleans grease-caked floors in *one-tenth the time required when hand-spudding!*

For general use, average duty, substantial savings are effected with a *100 Series Finnell* — the machine that's *two sizes in one!* Low, trailer-type construction permits use beneath furnishings. Noiseless in performance. Three sizes: 13, 15, and 18" brush diameter.

For general use, heavy duty, with emphasis on polishing needs, choose a motor-weighted machine. A *600 Series Finnell* gives 8-way adaptability!... has *safety switch* on handle... *2-way speed reduction,* providing *extra* protection for motor and gears... is self-propelled...noiseless. Four sizes: 11, 15, 18, and 21" brush diameter.

Finnell makes floor-maintenance machines for every type of floor care . . . also a full line of *Cleansers, Sealers, Waxes, Steel-Wool Pads, Mop Trucks,* and other accessory equipment. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2208 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

New research laboratory of Mine Safety Appliances Company at Pittsburgh, Pa. which was dedicated June 14.

Safety Research Laboratory Dedicated by MSA

THE world's largest research laboratory devoted to the development of safety equipment for all industries was dedicated in Pittsburgh, June 14, by the Mine Safety Appliances Company. About 400 leaders in safety and industrial hygiene and health, as well as top industrial executives, attended the dedication exercises.

Principal speaker was Ned H. Dearborn, president of the National Safety Council. For many years, Mr. Dearborn said, there has been an undercurrent of criticism of our scientists. This criticism has raised a large question about the ultimate intent and purpose, and a doubt about the moral and social values, of science. It has implied we have more skill than responsibility, that we have acquired power too great for our control; that we know too much, and care too little. In this laboratory we have the embodiment of a scientific purpose without reproach. It represents not only science at its best, but human purpose at its finest.

Mr. Dearborn described the laboratory as a physical plant and human organization forming a sharp, keen instrument of commerce and industry and scientific investigation whose ultimate worth will be measured by the number of men and women who will live longer because of it.

The new laboratory was dedicated to the memory of John T. Ryan, international pioneer in the field of industrial and mine safety and co-founder of Mine Safety Appliances Company. Mr. Ryan died in 1941.

George H. Deike, president of the company and original partner of Mr. Ryan in its founding 36 years ago, traced the firm's history.

Mr. Deike and Mr. Ryan had been engineers in the Mine Rescue and Recovery Division of the U. S. Bureau of Mines shortly after the bureau was established at Pittsburgh in 1910. Their experiences at mine fires and explosions led them to start a company supplying equipment to protect lives and property.

Since 1914, the company's activities have expanded from mining into all branches of industry on a worldwide scale. Today, the company is the largest manufacturer and supplier of safety equipment in the world.

Facilities of the new laboratory will be used in developing equipment and devices to combat hazards of all types. Constantly changing industrial processes bring new hazards that must be overcome by new safety equipment, Mr. Deike pointed out.

Safety equipment and instruments for use in such relatively new fields as air pollution and atomic energy are among the projects planned in the laboratory. There also will be continuing research to improve existing safety devices and rescue apparatus.

In the four-story laboratory building are many types of research instruments and equipment. These include high altitude chambers; dust, fume and gas chambers; a wind tunnel, and an electron microscope that permits study of dusts and other substances at a magnification up to 100,000 times.

The library of the new laboratory contains a comprehensive collection covering the fields of saftey

—To page 80

Harry S. Moses, (center), president of H. C. Frick Coke Company and new head of the coal operators' association, examining a miner's cap lamp. On his right is George H. Deike, president and co-founder of MSA; on his left is John T. Ryan, Jr., executive vice-president.

for industrial *First Aid*

MERCUROCHROME*

(H. W. & D. BRAND OF MERBROMIN, DIBROMOXYMERCURIFLUORESCEIN-SODIUM)

Do not neglect wounds, however small; even scratches and small cuts may become infected if they are not promptly and properly treated.

'Mercurochrome' (H. W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium) is one of the best antiseptics for first aid use. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association for this purpose.

The 2% aqueous solution is not irritating or toxic in wounds; minor injuries are reported more promptly when 'Mercurochrome' is the routine antiseptic, because treatment is not painful.

'Mercurochrome' solution keeps indefinitely; the color shows where it has been applied.

Physicians have used 'Mercurochrome' for more than 28 years.

Be sure to include 'Mercurochrome' in your first aid supplies.

*Reg. U. S. Pat. Off

HYNSON, WESTCOTT & DUNNING, INC.

H W D

BALTIMORE, MARYLAND

THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

Accidental deaths in April numbered approximately 7,000, a 3 per cent decrease from 7,200 for April last year. Most of the reduction occurred in home accident fatalities, but deaths from occupational and public non-motor-vehicle accidents also decreased. A relatively large increase was recorded in motor-vehicle deaths.

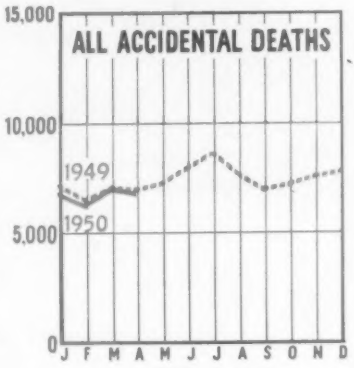
The four-month total was about 27,000, or 5 per cent less than in 1949. Home deaths showed a sizable decrease from last year; public non-motor-vehicle deaths, a moderate decrease; and deaths from occupational accidents, a small decrease. Motor-vehicle fatalities increased moderately over the first four months of 1949.

Motor-Vehicle Deaths

The motor-vehicle death total in April was 2,710, a 17 per cent increase over April, 1949.

The death total for the four months was 9,770, an increase of 11 per cent over 8,790 for 1949. The death rate per 100,000,000 vehicle miles was 7.1, a 1 per cent increase over the four-month rate of 7.0 for 1949, but 35 per cent below 11.0 for 1941.

Of the 46 states reporting for four months, 10 had decreases, 2 showed no change and 34 reported increases. Reporting cities with populations of 10,000 or more showed no change in deaths from April last year, but had 2 per cent fewer deaths than last



	1950	*1949*	*Change*
April	7,000	7,200	—3%
Four Months	27,000	28,300	—5%

year for the January-April period.

Regional changes from 1949 in the four-month death totals were:

North Atlantic	+ 6%
South Atlantic	+19%
North Central	+10%
South Central	+18%
Mountain	+42%
Pacific	0

Occupational Accidents

There were approximately 1,100 deaths from occupational accidents in April, a decrease of 8 per cent from April last year. The four-month total was about 4,000, a reduction of 5 per cent from 4,200 in 1949.

Decreases in accident rates were recorded in accident prevention contests. The April frequency rate for plants in community council inter-plant contests was 7.25, a 31 per cent reduction from 1949. The April rate for plants in the seven sectional contests conducted by the National Safety Council was 6.98, a 30 per cent decrease. The four-month rate in the community council contests was 7.00 — down 14 per cent, while in sectional contests it was 6.95, a 30 per cent reduction.

Public Deaths

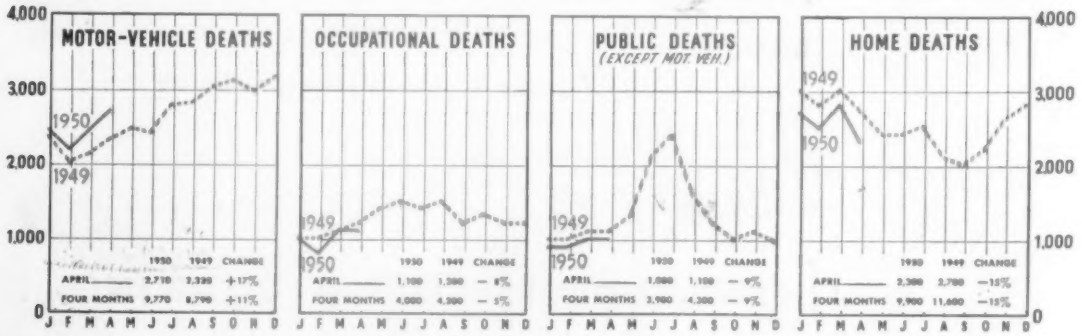
The April death total for public non-motor-vehicle accidents was approximately 1,000, a decrease of 9 per cent from last year.

The four-month death total was about 3,900, a reduction of 400 deaths from 1949. Sizable decreases occurred in deaths from firearms accidents and drownings and moderate reductions were reported in transportation accidents, falls and unclassified public accidents. Fatal burns increased moderately over last year. All age groups showed some reduction, with the greatest improvement recorded for children under 5 years and persons 15 to 24 of age.

Home Deaths

Home accident fatalities in April numbered 2,300, a 15 per cent decrease from April, 1949.

The total for the four months was approximately 9,900, or 15 per cent less than the 1949 comparable total of 11,600. Most of the improvement was in deaths from mechanical suffocation, firearms accidents, falls and unclassified home accidents. Fatal poisonings and burns showed little change from last year. The death total for children 5 to 14 years of age showed the largest reduction from 1949, but deaths of children under 5 years and of persons 25 years and over also decreased.



The dress that needn't have been so beautiful

THERE'S NO REAL REASON for a girl to have the most beautiful dress in the world. Even my daughter Sally. Even if she has her heart set on it.

But—I bought it. And when I paid the bill, I whistled! Partly with the well-known father's bill-shock. Partly for happiness. Because, Sally was right—there never *was* a prettier dress to get married in.

It's times like that—when we can buy something really important even if it is a luxury—that I feel like such a lucky guy.

And times like when my wife got sick, and we could give her the good care she needed to get well. And the swell day-in, day-out feeling of *knowing* that if an emergency comes, you've got the money to meet it.

I know the luckiest day of my life was when I signed up to save regularly through the Payroll Savings Plan at the office. I'd tried every which way to save before, but, brother, this *automatic* way is the only way that *works—for you—all the time!*

Buying U. S. Savings Bonds . . . whether by the Payroll Savings Plan or the Bond-A-Month Plan . . . is the safest, "foolproofest," easiest method of saving since money was invented. And every $3 you invest will turn into $4 in just 10 years.

Automatic saving is sure saving—U.S. Savings Bonds

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

British Safety Head to Address Congress

WALLACE B. PHILLIPS, founder and chairman of the Royal Society of Accident Prevention in London, will speak at the Annual Meeting of the 38th National Safety Congress in Chicago, October 16. Born in New York, Mr. Phillips was one of the founder members of the London "Safety First" Council when that body was formed in 1916 as the pioneer safety organization of England and ever since that time his interest in safety has been maintained.

Mr. Phillips is a prominent member of the American community in London and is especially well known in business circles.

He is a frequent visitor to this country where he has addressed several previous meetings of the National Safety Congress.

During World War II, Mr. Phillips was director, Special Information Services, Office of Strategic Services in Washington.

* * *

A high spot in the Congress program will be a joint meeting of the National Safety Council and the American Academy of Pediatrics at which the subject of accidents as childhood's greatest hazard will be discussed. The meeting, to be held in the Grand Ballroom of the Palmer House on Tuesday evening, October 17, will have Dr. Edward B. Shaw, president of the American Society of Pediatrics, and Ned H. Dearborn, NSC president, as co-chairmen. They will outline the child safety program as viewed by their organizations. The purpose of the meeting is to de-

Date and Hotel Assignments

	Hotel	Oct. 16 Monday AM	Oct. 16 Monday PM	Oct. 17 Tuesday AM	Oct. 17 Tuesday PM	Oct. 18 Wednesday AM	Oct. 18 Wednesday PM	Oct. 19 Thursday AM	Oct. 19 Thursday PM	Oct. 20 Friday AM
Sectional Sessions										
Aeronautical Ind.	Stevens		X				X-jt.			
Air Transport	Stevens				X		X-jt.			
Auto. & Mach. Shop	Congress		X				X			
Cement & Quarry	Stevens						X		X	
Chemical	Stevens		X		X		X			
Coal Mining	Stevens		X		X		X		X	
Commercial Vehicle	LaSalle			X	X	X	X	X-jt.	X	
Construction	Stevens				X		X			
Electrical Equip't.	Congress						X		X	
Food	Morrison				X		X		X	
Glass & Ceramics	Congress		X		X					
Industrial Nursing	LaSalle		X		X				X	
Marine	Morrison				X		X	X	X	
Meat Pkg.-Tng. & L.	Stevens		X		X					
Metals	Stevens		X		X		L		X	
Mining	Stevens		X		X		X		X	
Petroleum	Stevens		X		X		X			
Power Press	Congress				X				X	
Printing & Publ'g.	Stevens								X	
Public Employee Com.	Stevens		X							
Public Utilities	Stevens				X				X	
Pulp & Paper	Stevens		X		X		X		X	
Railroad	Morrison				X		X		X	
Rubber	Stevens				X		X			
Textile	Congress				X		X		X	
Traffic	Congress		X	X	X	X	X	X	X	
Transit	LaSalle				X	X	X	X-jt.		
Wood Products	Congress		X		X		X			
Divisional Sessions										
Farm	LaSalle			X	X	X	X	X	X	
Home	LaSalle					X	X	X		
School & College	Morrison		X	X	X	X	X	X	X	
Women's Activities	Blackstone		X							
A.S.S.E.-Subject Sessions										
A.S.S.E. Ann. Mtg.	Stevens			X						
Subject Sessions	Stevens & Congress					X		X		X
General Sessions										
Annual Council Mtg.	Stevens	X								
Banquet	Stevens						X Eve.			
Early Morn. Sess.	Stevens			X		X		X		X

velop practical methods whereby the medical profession and organized safety interests can mutually aid in reducing the high toll of accidents to children.

Prominent speakers will discuss methods of preventing child accidents through pediatric practices and ways of organizing a community for child safety.

ASKED and ANSWERED

Assistance with problems of accident prevention and industrial health is offered by National Safety Council. All inquiries are answered by mail and a few topics are selected for publication.

Odorants for LPG

Question: We use propane gas in manufacturing hydrogen for plant use. Our questions are (1) Is it safe practice to buy the gas without the odorant that usually is added to identify leaking gas readily, and (2) What treatment is recommended for burns that may develop in the handling of propane gas?

Answer: (1) No, liquefied petroleum gases should be effectively odorized. It is definitely hazardous to use such gases without the identifying odorant.

(2) Burns do not develop from handling propane gas, any more than from any other flammable material. On the other hand, there is danger of a freezing action as the gas is released, since propane gas vaporizes so readily it absorbs heat from anything in contact with it. For this reason, non-absorbent gloves should be worn by handlers, and any freezing injury should be treated the same as frostbite.

WANTED

Part and full time work glove salesmen, with following of industrial accounts. Car necessary, travel, commission. May carry non-conflicting safety equipment lines. Address Box 408, NATIONAL SAFETY NEWS.

SAFETY ENGINEER SUPERVISOR

Desires position with Insurance Company. 13 years' experience in compensation, fleet, fire and safety. 37 years old. Married. Member ASSE. Will go anywhere. Address Box 409, NATIONAL SAFETY NEWS.

NOW! AN IMPORTANT and EXCLUSIVE NEW IMPROVEMENT IN FIRE EXTINGUISHERS

BUFFALO better-built

VL FIRE EXTINGUISHERS with-

DRYEX THE AMAZING NEW DRYING AGENT!

Long proved for its speed and effectiveness in fighting fires of electric origin, also against fires in oils, gasoline, paint, greases and other flammable liquids, the Buffalo *better-built* VL Fire Extinguisher is now more dependable than ever! Each VL Extinguisher now contains DRYEX, the exclusive new drying agent that removes all traces of moisture, prevents corrosion and rust, insures continuous accuracy of performance and adds many years to the dependable life of the extinguisher.

1-qt. VL Fire Extinguisher containing DRYEX

Also available in 1½-qt., 1-gal. and 2-gal. sizes

WRITE US for full information on **DRYEX** and name of your nearest Buffalo distributor.

BUFFALO FIRE APPLIANCE CORPORATION
DAYTON 1, OHIO

Established 1895

OUT OUR WAY

OWOOH! FOR NINE YEARS HE'S BEEN STANDIN' ON SOL-SPEEDI-DRI AN' HE DON'T KNOW WHAT IT'S FOR!
BECAUSE IT'S NONE OF MY BUSINESS! THEY GOT MEN DOIN' THAT!
WHY IS IT SOME PEOPLE HAVE GOTTA BREAK A LEG OR ARM OR SUMPIN' BEFORE THEY BOTHER TO FIND OUT ABOUT SOL-SPEEDI-DRI?
THE HERMIT
J.R.WILLIAMS

Promote Safety and Production

BY USING

SOL·SPEEDI·DRI

Spread SOL-SPEEDI-DRI on the floor. It soaks up all liquids—oil and grease included. Shop floors are safe for working, safe for walking... and safe working conditions help speed production. SOL-SPEEDI-DRI cuts floor-cleaning costs and helps reduce fire hazards, too. Constant, thorough testing at our own laboratories assures you top quality in every bag. Clip the coupon, send it today... see for yourself what an important job SOL-SPEEDI-DRI can do for you!

SPEEDI-DRI CORP., 1 WALL ST., NEW YORK 5, N.Y.

Warehouse stocks maintained in principal cities of the United States and Canada.

Inquirers in New York, New England and New Jersey should write to Speedi-Dri Corp. Elsewhere in U.S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa.

FREE SAMPLE: Fill out the coupon and mail today for big, free sample.

Name _____

Address _____

City _____ State _____

NSN-850

Petroleum Reports All-time Safety Record

The petroleum industry established an all-time safety record in 1949, according to the annual summary of injuries compiled by the Department of Safety of the American Petroleum Institute.

The record is even more impressive than it appears because 7,751 more employees were covered in the 1949 report than any previous study. Total exposure exceeded one billion hours.

Best previous safety performance for the petroleum industry was in 1939. By breaking the 1939 record, the petroleum industry resumed the steady trend toward safer operations which it maintained before the war. During the war years, injury rates increased disproportionately because of the shortage of skilled manpower and the constantly increasing tempo of production and output.

Comparative figures based upon the 1949 API study show that as a result of the petroleum industry's over-all safety program and employee training, the average employee is now three times safer at work than he is in his own home.

The 1949 study resulted from the experience records of 263 oil companies employing 478,583 persons.

The frequency rate of injuries in 1949 dipped to 10.54 per million man-hours worked, and the severity rate of injuries declined to 1.03 days lost per thousand man-hours worked. This represents an improvement of 14 per cent under the 1948 frequency rate, and 11.2 per cent under the 1948 severity rate.

The 1949 frequency and severity rates both are under the 1948 all-industry averages. Statistics on the all-industry averages for 1949 are not available yet, but they are believed to be comparable to the 1948 totals.

The greatest improvement in safety performance in 1949 was in the drilling department. Here, the frequency rate of injuries showed a decline of 24 per cent below the 1948 totals. Among the safest operations, according to the study, were wholesale marketing and refining.

Plan Safety Library for Foundry Industry

Plans for the formation of a library of information on foundry equipment and devices incorporating safety features have been announced by the Gray Iron Founders' Society, Cleveland 14, Ohio. Manufacturers of foundry equipment have been invited to contribute to such a library and the invitation is extended to all other producers of equipment and devices having a foundry application.

For this particular purpose, only the safety features of such equipment are desired. Data should include glossy photographs of the unit or device (preferably an actual installation), a schedule of prices, a clear description of the safety features and—but incidentally—other factors of interest dealing with efficiency, low maintenance costs, etc.

A safety booklet for foundry workers is being planned as part of the Society's program to reduce accidents in the industry. In 1949, the gray iron foundry industry reduced its accident frequency rate 20 per cent from the 1949 rate.

Top Safety Award Goes to Lederle

The 1949 Frank E. Redmond Grand Award for safety was presented to Lederle Laboratories Division, American Cyanamid Company, Pearl River, N. Y., by the Associated Industries of New York State. Lederle was given the award for having won the 1949 Accident Prevention Campaign sponsored by the association.

During the thirteen weeks of the campaign, Lederle employees worked a total of 1,483,230 manhours without an accident, the highest record attained among the more than 1,000 competing plants. Seventy-eight different classifications of industry participated, and Lederle took first place in both the Light Chemicals Class I Group and the campaign as a whole.

The 1949 campaign, which was the 25th annual contest sponsored by the Associated Industries, was dedicated to Frank E. Redmond, the organization's founder.

METAL PLANT
owner estimates savings of $7690 per year with Pangborn Dust Control.

ASBESTOS PRODUCER
reports profit of $20 a day with Pangborn Dust Control.

FOOD PROCESSOR
writes Pangborn Dust Control saves him $3048 per year.

CARBON PRODUCER
reports $1471 yearly profit with Pangborn Dust Control.

CHEMICAL MFGR.
states Pangborn Dust Control saves him $14,859 a year.

FEED MILLER
reports approximately $50 saved each day with Pangborn Dust Control.

WOOD FABRICATOR
estimates $875 saved every year with Pangborn Dust Control.

REFRACTORY
executive reports savings of $4318 per year with Pangborn Dust Control.

RUBBER PLANT
owner reports $100 profit each month with Pangborn Dust Control.

CHARCOAL MFGR.
estimates yearly saving of $13,900 with Pangborn Dust Control.

WHICH DUST PROBLEM BOTHERS YOU ?

READ HOW PANGBORN DUST CONTROL STOPS DUST PROBLEMS LIKE THESE— *at a profit!*

As these authentic cases from Pangborn's files show, Pangborn Dust Control stops dust at a profit! Even where dust can't be sold or re-used, Pangborn users report impressive savings from $1200 to $7000 and more a year.

And where dust is valuable (made up of products or raw materials), annual savings of $12,000, $13,000 or $14,000 a year are not uncommon for Pangborn installations.

FIND OUT HOW MUCH YOU CAN SAVE! A Pangborn Dust Survey costs nothing—but will show you how you can *turn the dust in your plant* into cash savings. For details, write the PANGBORN CORPORATION, 3100 Pangborn Blvd., Hagerstown, Maryland.

Look to Pangborn for the latest developments in Dust Control and Blast Cleaning Equipment.

STOP the DUST HOG from stealing profits with

Pangborn

DUST CONTROL

For Distinguished Service

Recent presentations of the National Safety Council's Award of Honor for Distinguished Service to Safety

Stars indicate number of awards since the first.

Oil Well Supply Co.

★ *Imperial Works, Oil City, Pa.*—For operating without a disabling injury from December 22, 1948 to April 30, 1950. The award was presented by E. W. Kempton, assistant vice-president, United States Steel Corporation of Delaware, Pittsburgh, Pa.; vice-president for membership, National Safety Council.

★ *Wilson-Snyder Mfg. Div., Braddock, Pa.*—For the operation of 3,284,722 man-hours without a disabling injury from June 16, 1945 to April 30, 1950. The award was presented by E. W. Kempton.

Tennessee Valley Authority

Watauga Dam Project, Watauga, Tenn.—For an outstanding safety performance during the years 1946 through 1949. The injury frequency rate during those years was only 17 per cent of the group average—injury severity rate was less than half of such average.

Westinghouse Electric Corp.

Awards presented to 11 installations for outstanding safety performances during the year 1949:

★★★ *Electronics and X-Ray Div., Baltimore, Md.*

★★ *Electronics and X-Ray Div., Lansdowne, Md.*

★★★ *Home Radio Div., Sunbury, Pa.*

★★★ *Small Motor Div., Lima, Ohio.*

★★ *Northwestern District Manufacturing and Repair, Chicago, Ill.*

★ *Transformer Div., Sharon, Pa.*

Industrial Heating Plant, Meadville, Pa.

Electric Appliance Div., Mansfield, Ohio.

★ *Steam Div., Essington, Pa.*

Sturtevant Div., Hyde Park, Boston, Mass.

Buffalo Works, Buffalo, N. Y.

Present Award for Canadian Safety Film

The Honorable Lionel Chevrier, Minister of Transport, at a Canada Day ceremony in Chicago accepted on behalf of the Canadian Government a plaque awarded the motion picture *Safe Clothing* judged the outstanding film in the Occupational Safety Field produced last year for the Canadian Department of Labour by the National Film Board.

The National Committee on Films for Safety, represented by William Englander of the National Safety Council (left) presented the trophy to Mr. Chevrier acting on behalf of the Honorable Robert H. Winters, Minister of Resources and Development, under whose direction the National Film Board functions.

The National Committee on Films for Safety is composed of twenty-one cooperating organizations such as The American Automobile Association, American National Red Cross, International Association of Chiefs of Police, U. S. Jr. Chamber of Commerce, American Public Health Association. Founded originally in 1938 by some half dozen interested companies for the purpose of promoting safety through visual education, the Committee has grown to its present size with the same objective in mind.

One of the major functions of the National Committee is the annual safety film contest in which the outstanding films are selected in various classifications and suitable awards presented.

The Committee of Judges met in New York City in March 1950 and selected as the winning non-theatrical motion picture in the Occupational Safety Field the film

Hon. Lionel Chevrier, Canadian Minister of Transport, (right), receives plaque awarded film, "Safe Clothing," from William Englander, National Safety Council.

Safe Clothing, produced for the Canadian Department of Labour by the National Film Board.

Another film, produced and sponsored by the same agencies, *Are You Safe at Home?* won honorable mention in the Home Safety field.

Safe Clothing, the fifth film in the *Accidents Don't Happen* Series, sponsored by the Canadian Department of Labour, was written and produced by Donald Mulholland, recently appointed Director of Production of the National Film Board by the Canadian Government Film Commissioner, W. Arthur Irwin. These films are distributed in the United States by Castle Films, Division of United World Films Inc., 1445 Park Avenue, New York 29, N. Y.

It can happen that a man may fear death less than he ought.

—*St. Thomas Aquinas: "Summa Theologica."*

Any traffic cop will endorse that.

SENSATIONAL
NEW FOAM-X
MIRACLE-MAT

New, Improved Foam-X Conditions Sore, Tender Feet

Foam-X is an amazing, quick-acting foot conditioning application for shower room use . . . MILD and PLEASANT. A Texas manufacturer's report calls Foam-X "A Godsend for sore, blistered feet." (Full text on request).

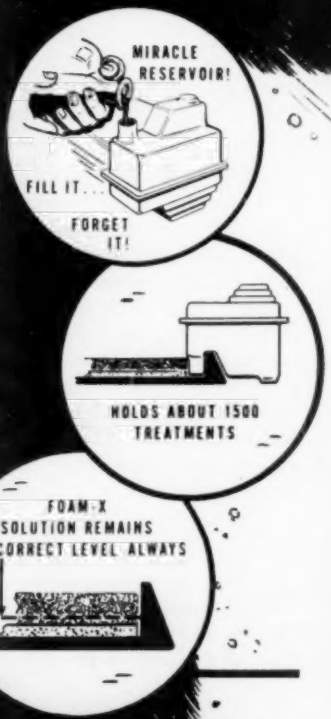
Foam-X is UNCONDITIONALLY GUARANTEED. If two weeks of daily use of Foam-X fails to step up skin resistance to fungus attack and so stop athlete's foot, you owe us nothing. YOU TRY IT BEFORE YOU BUY!

Patent Applied For

Nothing Else Like MIRACLE MAT!
Fill It and Forget It . . .

The new Foam-X Miracle Mat is the most important new development in shower room foot treatment in years. Miracle Reservoir eliminates nuisance of daily mat refilling . . . holds almost one gallon of Foam-X solution . . . automatically feeds the sponge rubber mat as Foam-X is used. Solution in mat remains at same level always . . . not too *full*, not too *dry*, but JUST RIGHT. No more SPLASH, no WASTE, *NEVER AGAIN A DRY MAT*. What's more, Miracle Mat saves up to 9/10's of serviceman's work. One filling of Miracle Reservoir holds about *1500 foot treatments* . . . every bather is INSURED A 100% EFFICIENT FOAM-X FOOT CONDITIONING TREATMENT . . . EVERY TIME! Reservoir is made of Royalite plastic, very tough to last for years.

Write today for our two weeks trial plan. If trial of non-toxic Foam-X fails to stop athlete's foot by stepping up skin resistance to fungus attack you pay us nothing. Try it . . . you be the SOLE JUDGE.



FOAM-X COMPANY

334 W. Alamar Avenue • Santa Barbara, California
(Eastern shipping depot — Huntington, Ind.)

The Safety Library

Books, Pamphlets and Periodicals of Interest to Safety Men

Industrial Chemistry

Industrial Chemistry, an Elementary Treatise for the Student and General Reader. By Emil Raymond Riegel, Ph.D., with numerous collaborators. Published by Reinhold Publishing Corporation, 330 W. Forty-Second St., New York. XIII, 1015 pages, fifth edition. Price $7.00

The previous edition of this standard textbook appeared in the latter part of 1942. The enormous changes in the chemical industry in the intervening eight years, and the consequent obsolescence in source books in such a short time is only properly realized by reading through the material contained in the new edition.

Thirteen of 50 chapters contain sections of entirely new material ranging from atomic reactors to photosensitive glass, but in all cases representing entirely new industrial processes in this country and, in a surprising number of instances, representing processes with entirely new and unique materials.

While there was some information in the previous edition, for instance, about the synthetic rubber industry, it was almost exclusively about a foreign development of interest to chemical engineers in this country but not of very immediate practical moment. Now, there is a considerable section about our own large and fairly healthy synthetic rubber industry and auxiliary material on the production of its raw materials.

There was, quite naturally, nothing in the previous edition on the production of the antibiotics or on the large scale production of color photographic materials as practiced at the present time.

It is scarcely necessary to recommend a book as well known as this one, further than to say that the present edition is a worthy successor to the previous ones.

F. A. Van Atta

BOOKS AND PAMPHLETS

Aeronautics

Statistical Analysis of Non-Air Carrier Aircraft Accidents for the Year 1949. Published by Civil Aeronautics Board, Washington 25, D. C., 1950. 45 p. Free.

Fire Protection

Organizing Your Plant for Fire Safety. Published by Associated Factory Mutual Engineering Division, 184 High St., Boston, Mass., 1950. 91 p. Price $2.00.

Mines

Achievements in Mine Safety Research and Problems Yet to Be Solved. Published by U. S. Bureau of Mines, 1950. 31 p. Available from the Bureau, Publication Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7573).

Permissible Mine Equipment Approved During The Calendar Years 1947-49. Published by U. S. Bureau of Mines, 1950. 16 p. Available from the Bureau, Publication Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7569).

Report on Electric Blasting in Sinking Shafts and an Earthing System for Headgears. Published by Prevention of Accidents Committee of the Transvaal Chamber of Mines, Johannesburg, South Africa, 1950. 5 p. Free.

Report on Truck and Tramway Accidents on the Gold Mines of the Witwatersrand and Extensions. Published by Prevention of Accidents Committee of the Transvaal Chamber of Mines, Johannesburg, South Africa, 1950. 25 p. Free.

Review of Dust-Allaying Practices at Working Faces in Some Bituminous-Coal and Lignit Mines. Published by U. S. Bureau of Mines, 1950. 29 p. Available from the Bureau, Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7566.)

Use of Dust Respirators in Coal Mines. Published by U. S. Bureau of Mines, 1950. 6 p. Available from the Bureau, Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7561).

MAGAZINE ARTICLES

Clothing

Dress for the Job. By Bill Arrott. (In Operating Engineer, June 1950, p. 26.)

Fire Protection

Chicago Street Railway Car Fire. Preliminary Report. (In N.F.P.A. Fire News, June 1950, p. 4.)

Chicago Tanker-Trolley Crash Teaches Another Tragic Lesson. (In Fire Engineering, June 1950, p. 442.)

Industrial Fire Brigades. By Warren Y. Kimball. (In Best's Insurance News, June 1950, p. 55.)

L. P. Gas—What Fire Hazards? By George F. Prussing. (In Fire Engineering, May 1950, p. 346.)

New Fire Extinguishing Agents Prove Highly Effective. (In Fire Engineering, May 1950, p. 357.)

The Regulation of Tank Trucks. By Robert S. Moulton. (In N.F.P.A. Fire News, June 1950, p. 5.)

Removing Hospital Fire Hazards. (In The Spectator, May 1950, p. 18.)

Hotels

Accident-Prevention Prize Won By 45-Year-Old Hotel, Reverses Further Time-Lost Injury Record. (In New York State Industrial Bulletin, June 1950, p. 30.)

Lighting

Lighting Fundamentals and How to Use Them. By Charles L.

Amick. (In Operating Engineer, June 1950, p. 42.)

Mines

Creating Interest in Safety Among Mine Workers. By Arthur Bradbury. (In Mechanization, May 1950, p. 122.)

Pinning Roof with Wood. By Sterling S. Lanier, Jr. (In Coal Age, June 1950, p. 78.)

Power Presses

Automation in the Press Room. By Herman F. Zorn. (In Tool Engineer, June 1950, p. 23.)

Riveting

Power Tool Drives Studs and Anchor Bolts. (In Paper Industry, June 1950, p. 276.)

Welding

Potential Hazards of Inert Gas-Shielded Arc Welding. By Harry Gilbert. (In Industrial Hygiene Newsletter, July 1950, p. 15.)

Safety Engineering Course At Pacific University

Emphasizing the human aspects of safety engineering, a seminar on loss-prevention in industry was held on June 5-7 under the joint sponsorship of the Portland Chapter of the American Society of Safety Engineers and Pacific University, Forest Grove, Oregon.

Key safety engineers from Oregon and Washington industries participated in a panel discussion entitled "The Human Elements of Safety Control" led by John W. Berry, D. David Darland, Richard Feinberg, and J. Russell Roberts, all of Pacific University's faculty, during the first day's session. On the following day the subject of "Conference Techniques" was explored under the leadership of Jack Frost, industrial personnel consultant, Seattle. Specific programs for the effective organization and conduct of conferences were presented. The final day's activities were highlighted by a systematic survey of the problems involved in the management of personnel, led by Richard Feinberg, chairman of the seminar.

Many of the registrants at this, the second annual graduate seminar on safety engineering held in Forest Grove, stayed over to participate in the seminar on Occupational Vision sponsored by Pacific University's newly organized Institute of Visual Sciences.

Reduced Premiums Soon Pay for a

BLAW-KNOX SPRINKLER SYSTEM

Deluge Systems, Wet Pipe Systems, Dry Pipe Systems, Water Spray and Fog Systems, Rate-of-Rise Sprinkler Systems, and Foam and Carbon Dioxide Extinguisher Systems.

"LITTLE JOEY SPRINKLER"

Remember, if you are burned out and have collected your insurance, you are *still the loser*—for there is no insurance against loss of income, good will and employees' jobs. A Blaw-Knox Sprinkler System engineered for the fire hazards existing in or around a plant is industry's most effective weapon against fire. It's on the job 24 hours a day dousing *fires at their start,* sounding alarms, closing safety doors . . . all in a matter of seconds.

Blaw-Knox can arrange to have your insurance savings applied annually until the cost of the sprinkler system has been amortized... providing you with the utmost in fire protection plus a good financial investment.

Glad to consult with you and submit an estimate without obligation.

BLAW-KNOX SPRINKLER DIVISION
OF BLAW-KNOX CONSTRUCTION COMPANY
829 [illegible]ver Ave., N. [illegible] Pittsburgh 12, Pa.
Offices in Principal Cities

BLAW-KNOX FIRE PROTECTION SYSTEMS

Obituary

J. E. CULLINEY

JOHN EDGAR CULLINEY, chief safety engineer for Bethlehem Steel Company, Bethlehem, Pa.,

and a former vice-president of the National Safety Council, died July 7 at St. Luke's Hospital, Bethlehem, following a heart attack.

Mr. Culliney was born in Reading, Pa., August 15, 1890. He was graduated from Lehigh University with the degree of M.E. in 1913 and the same year entered the employ of the American Iron & Steel Company at Lebanon, Pa. In 1917 Lebanon was acquired by Bethlehem Steel Company and Mr. Culliney continued in safety work at that plant. In 1923 he was transferred to the Bethlehem office as safety engineer in charge of the work in all of the Company's operations. He played an important part in organizing the Seven Steel Company Safety Exchange and the Atlantic Shipyards Safety Exchange.

For many years Mr. Culliney was active in the Metals Section, NSC, and in the American Society of Safety Engineers. He was also a member of the Council's Board of Directors and was vice-president for engineering, 1931-34.

DR. W. F. SNOW

DR. WILLIAM FREEMAN SNOW, founder and board chairman of the American Social Hygiene Association, New York, died suddenly in Bangor, Maine, June 12. He was also president of the International Union Against the Venereal Diseases.

Dr. Snow received his M.D. degree from Stanford in 1900 and took post-graduate courses at Johns Hopkins and at other institutions at home and abroad. Returning to Stanford he served as university physician and professor of hygiene and public health. He was state health officer of California 1908-14. In the latter year he became director of the newly organized American Social Hygiene Association.

In 1917 he was appointed by the President as a member of the National Council of Defense and was on active duty with the U. S. Army in the Surgeon General's office and with the American Expeditionary Force. From 1936 he had been special consultant for the U. S. Public Health Service.

Safety Equipment Assn. Elects Officers

Safety equipment business is expected to remain good at least through the first half of 1951 with a slow but steady decrease in the rate of industrial accidents, according to the report of President L. E. Dickson presented recently at the Annual Meeting of the Industrial Safety Equipment Association at White Sulphur Springs, W. Va. Mr. Dickson is also president of Standard Safety Equipment Company, Chicago, and a member of the Coordinating Committee of the President's Industrial Safety Conference.

The following officers and directors were elected for one year:

President — C. H. Gallaway, Sales Manager, Safety Division, American Optical Company, Southbridge, Mass.

Vice-President—E. L. Wheeler, Wheeler Protective Apparel, Inc., Chicago.

C. H. Gallaway

Director-at-Large — E. H. Brooks, Safety Clothing & Equipment Company, Cleveland, Ohio.

Director-at-Large — G. P. St. Clair, Medical Supply Company, Rockford, Ill.

To serve for two years are:

Director-at-Large—F. R. Davis, Jr., Davis Emergency Equipment Co., Inc., Newark, N. J.

Director-at-Large — S. C. Herbine, Willson Products, Inc., Reading, Pa.

The retiring president, L. E. Dickson, will also be on the Board for another year.

Stewart N. Clarkson, 420 Lexington Avenue, New York 17, was reappointed Secretary-Treasurer.

Personals

MAJOR HIRAM L. LAWYER has been assigned to Headquarters, 2nd Medium Port for duty as the Port Safety Officer. Major Lawyer formerly was the safety and fire prevention inspector of Los Angeles, Calif., and attended the Center for Safety Education at New York University.

Major Lawyer served in the United States Army from 1926 to 1928 as an enlisted man. Reentering the Army in May 1942, Major Lawyer served as the Deputy Director of Public Works with the United States Military Government in Korea from September 1945 until November 1947.

HANDLING HANDICAPS?

handle them better with HOOD gloves!

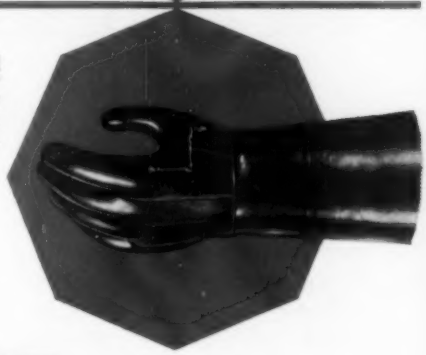
Many are the dangers to which employees' *vital* hands can be exposed in the course of a day while handling shipping crates, or when working with chemicals, oils, acids, etc.

Shown here are just two of the many types of Hood Industrial Gloves available to help rid you of any handicaps in these various handling operations . . . gloves backed by the combined and continuing efforts of experienced chemists, engineers and technicians using the most modern equipment and techniques available.

Let the *proof* of "on the job" testing of Hood Industrial Gloves handle your protection problems from now on. Our catalog will show you the complete line of Neoprene, Rubber or Plastic coated gloves for *every* type of industry.

HOOD for NEW Safety PLUS

MODEL #4703
—Full Neoprene coated, knit wrist style . . . liquid proof . . . curved fingers . . . no seams on working surface . . . for all industry.



MODEL #7702
—Full Neoprene coated industrial weight 14½" gauntlet. 6" cuff . . . liquid proof . . . curved fingers . . . for all general industry.

HOOD RUBBER CO. Watertown, Mass.

BRADLEY WASHFOUNTAINS INSTALLED IN LOUISIANA COCA-COLA PLANT

Louisiana Coca-Cola Bottling Co., Ltd., New Orleans, La.

Employees enjoy the convenience of Bradley Washfountains—no faucets, therefore no contagious contacts.

Showing two Bradley wall-type Washfountains in use. Each Semi-Circular serves 3 to 5 workers simultaneously.

In the modern Louisiana Coca-Cola Bottling Company plant, Bradley Washfountains were the choice for maximum in sanitation, economical operation and modern appearance.

Wherever absolute cleanliness is required, Bradleys with sanitary foot-control and self-flushing drain are invariably selected. One Bradley full-circle Washfountain serves 8 to 10 workers simultaneously and requires only three connections—hot water, cold water and drain—in contrast to the multiple piping connections needed with conventional wash basins.

With a Bradley, water consumption is cut 70% to 80%, maintenance is reduced, and maximum health protection is afforded. BRADLEY WASHFOUNTAIN CO., 2237 W. Michigan St., Milwaukee 1, Wisconsin.

BRADLEY washfountains

Distributed Through Plumbing Wholesalers

Write today for Condensed Catalog D-713

Safety Award to Air Force

For a reduction in the ground accident frequency rate of 16.9 per cent during 1949 over 1947-48, the Air Force received a National Safety Council certificate of commendation. The improvement was achieved through an effective ground safety program. The certificate was presented June 6 by Ned H. Dearborn, president of the National Safety Council, at a special ceremony in the Pentagon.

In the above illustration, left to right, are: C. H. Osthagen, deputy for personnel management, Office of Assistant Secretary of USAF; Col. Charles Maylon, USA (Ret.) Assistant to President Truman; Col. W. L. Tubbs, Assistant for Ground Safety, DCS/Personnel, USAF; Hon. Thomas K. Finletter, Secretary of the U. S. Air Force; Mr. Dearborn; Donald S. Dawson, Administrative Assistant to President Truman.

Eight Companies Cited For Eye Safety

Eight industrial organizations have received "Certificates of Appreciation" from the National Society for the Prevention of Blindness in recognition of "outstanding service" in helping to promote the Wise Owl Club of America, an eye-safety organization for industrial workers which now has 991 members and is adding new workers at the rate of 70 a month.

These 991 workers, who saved their sight by having their safety goggles in place when an accident occurred, have also saved their employers an estimated $3,260,000 in compensation payments alone.

The eight organizations: American Car and Foundry Company; United States Rubber Company; the Electro-Metallurgical Division of Union Carbide and Carbon Corporation; Reynolds Metals Company; General Electric Company; Lone Star Cement Corporation; E. I. duPont de Nemours and Company; and the Safety Council of the Fort Wayne Chamber of Commerce.

To become a member of the Wise Owl Club, a worker must submit his smashed or burned goggles as proof that they saved him from partial or complete blindness. If the proof is adequate, he receives a small gold pin which identifies him as a member.

Idea for the club came from Joe Folks, a worker at the St. Louis plant of the American Car and Foundry Company. Over a period of years, he had noticed how many times a worker's goggles prevented a serious eye injury. He suggested that a club be formed of workers who saved their sight by wearing goggles. Plant officials liked Folks' idea; a survey of the ten ACF plants was made, and 76 candidates were found eligible. That was in 1947. Today, there are 208 ACF employees in the club.

Realizing that the club was a potent eye-safety incentive, ACF turned it over in November 1948, to the National Society so that it could be made available to every safety director. Today there are Wise Owl chapters in 191 industrial plants in 34 states, Hawaii, and Canada. These plants employ a total of over 240,000 workers.

Heads NFPA

A. H. S. Stead, Dominion Board of Insurance Underwriters, Montreal, Canada, was elected president of the National Fire Protection Association at the Annual Meeting held in Atlantic City during May. Stead is the first Canadian to be elected to this position.

Others elected were: vice-presidents: Allen L. Cobb, safety director, Kodak Park Works, Eastman Kodak Company, Rochester, N. Y., and T. Seddon Duke, secretary-treasurer, Star Sprinkler Corp., Philadelphia; secretary-treasurer; Hovey T. Freeman, president, Manufacturers Mutual Fire Insurance Company, Providence; Chairman of Board of directors: Richard E. Vernor, manager Fire Prevention Dept., Western Actuarial Bureau, Chicago.

NFPA Board of Directors elected include: Leonard C. Lund, deputy commissioner, Minnesota Insurance Dept.; R. D. MacDaniel, vice-president, Grain Dealers National Mutual Fire Insurance Co., Indianapolis; George J. Richardson, secretary, International Association of Fire Fighters, Washington, D. C.; W. W. Sampson, manager, South-Eeastern Underwriters Association, Atlanta; R. C. Sogge, manager, Standards Division, General Electric Company, Schenectady; A. H. Baum, building commissioner, St. Louis.

It was announced that the 55th Annual Meeting of the NFPA will be held in the Hotel Statler, Detroit, Michigan, May 7-10, 1951.

Dust Explosions Increase In Industry

Dust explosions in the United States are multiplying greatly. Hylton R. Brown, U. S. Bureau of Mines, College Park, Md., told members of the National Fire Protection Association meeting at their 54th Annual Meeting.

"A dust explosion can occur in any industrial plant or manufacturing establishment where combustible dust is created—28,000 U. S. plants are subject to dust explosions," he said. "These plants employ 1,325,000 persons, represent property values of several billions of dollars and manufacture products with an annual value of more than $10,000,000.

"In the 193 dust explosions reported in the U. S. for the years 1941-48, 105 lives were lost and the total property loss of more than $37,000,000 during these 8 years far exceeds the loss during any previous similar period for which information is available." Brown predicted that if U. S. dust explosion losses continue at the present high rates, the total for the current decade will be more than three times the total for the previous ten years.

Award Scholarships in Fire Protection and Safety

Sixteen scholarships in fire protection and safety engineering to Illinois Institute of Technology, Chicago, have been awarded by the stock fire insurance companies through the Western Actuarial Bureau.

Each award provides payment of tuition and other fees for the regular four-year course at Illinois Tech, the only college or university in the nation offering a degree in fire protection and safety engineering.

Winners were selected by the scholarship committee of the Western Actuarial Bureau on the basis of competitive examination, high school record, and extra-curricular activities.

During the summer vacations, the Actuarial Bureau assigns each scholarship student to a position with one of the midwest inspection bureaus. After graduation the student goes on the full-time payroll with the same firm.

U·S·S
MULTIGRIP
FLOOR PLATE
comfortable to work on,
comfortable to walk on.
Safe . . . wet or dry!
● The flat-topped risers of U·S·S Multigrip Floor Plate are easy on the feet . . . tend to reduce accident-breeding fatigue. The sloping sides of the risers make it impossible to catch the toe of a shoe on them.
And Multigrip has no gutters to catch thin wheels of vehicles. Wheels roll on the risers, not between them.
Attractive, easy-to-clean Multigrip offers sure footing for workers, positive traction for vehicles. Get further information about Multigrip from your nearest steel warehouse, or write to us direct.
Carnegie-Illinois Steel Corporation, Pittsburgh
Columbia Steel Company, San Francisco
Tennessee Coal, Iron & Railroad Company, Birmingham
United States Steel Supply Company,
Warehouse Distributors, Coast-to-Coast
United States Steel Export Company, New York
USS
MULTIGRIP FLOOR PLATE
UNITED STATES STEEL

Industrial Health

Highlights in Industrial Medicine, Hygiene and Nursing
Compiled by F. A. Van Atta, Industrial Department, NSC

Vacations and Health

The Contribution of Vacations to Employee Health by Mary D. Owen. Industrial Medicine and Surgery 19: 192-197 (April 1950).

The trend toward the provision of paid vacations for industrial employees has been gaining momentum at an increasing rate in the last few years. In 1937 about one industrial plant in four had paid vacation arrangements, while in 1946 the proportion was three plants in four. Since vacations are provided on the theory that they will improve the health and well-being of the employees and thus contribute something, in the long run, to the efficiency of the operation of the plant it seemed like a good idea to investigate what actual effect the vacations were having.

The sample investigated was a group of 300 employees of the Oak Ridge National Laboratory who were interviewed shortly after their return to work from a vacation. The measures of the success of the vacation from a health aspect which were considered in this survey were: an improvement in the persons feeling of well-being, an improvement in his general state of health and a satisfactory attitude about returning to work.

One rather surprising result of the questioning was the discovery that over 49 per cent of those expressing an opinion preferred a vacation in the Spring or Fall and less than 44 per cent preferred a Summer vacation.

The attitude toward return to work was related to sex, age, nutrition and health factors regardless of any vacation conditions.

The type of vacation, the time of the year, the amount of activity or exercise and the degree to which the desire for an ideal vacation was fulfilled had little bearing on the actual success of the vacation as a health measure.

The main factors contributing to improved health as a result of the vacation were the absence of tension, and particularly the absence of a large amount of driving, and engagement in activities which were different from the usual daily routine.

A single vacation of two weeks was more desirable than two one-week vacations in the same year.

Sulphur Dioxide

Possible Long-Term Effects of Exposure to Sulphur Dioxide by A. Anderson. The British Journal of Industrial Medicine 7:82-86 (April 1950).

There has been some confusion in the literature with respect to the possible long term effects of exposure to sulfur dioxide. Most investigators have said that chronic respiratory diseases will not develop from ordinary industrial exposure. On the other hand, there are published statements that asthma has occurred following exposure to fairly high concentrations.

In view of this controversy and the feeling of the men working on the job that the exposure to sulfur dioxide around the oil refinery must be either a cause or a contributing factor in the production of chronic bronchitis, tuberculosis and other chronic diseases it was decided to investigate the employees on the plant who had substantial exposure. The air-borne concentrations of sulfur dioxide had been taken for some time and it was known that the concentrations in recent years had varied from 0 to 25 p.p.m. In the period from 1938 to 1945 the concentrations had occasionally run as high as 60 to 100 p.p.m.

One hundred and forty-one men with exposure to sulfur dioxide and 137 from closely similar working environments but without exposure were examined.

In addition to the usual clinical examination vital capacities were determined on all of them and chest radiographs were taken. No evidence was found of any difference in health between the groups except that the vital capacity of the group exposed to sulfur dioxide averaged a little larger. The difference was of doubtful statistical significance and no explanation is attempted.

Cold Cures

Antihistaminic Agents and Ascorbic Acid in the Early Treatment of the Common Cold by Donald W. Cowan and Harold S. Diehl. The Journal of the American Medical Association 143: 421-424 (June 3, 1950).

This study was undertaken on a group of volunteer students at the University of Minnesota who were divided in the order of enrollment into five groups who received five different kinds of medication: Group 1 received a placebo of citric acid with binders and fillers to make a tablet. Group 2 received tablets containing 667 mg of ascorbic acid. Group 3 got 25 mg. phenindamine tartrate plus citric acid. Group 4 got 25 mg. phenindamine tartrate plus 667 mg. ascorbic acid. Group 5 received 50 mg. tripelennamine tartrate plus citric acid. The binders and lubricants in all of the tablets were identical.

Each student was given a box of tablets with written and oral instructions to take one tablet at the first sign of a cold and to repeat the dose every four hours until the cold was cured or the medicine, ten doses, was used up. The students were asked to report weekly on the presence or absence of symptoms during that week and their severity if present.

The 367 students who remained in the study group throughout the period treated 980 colds during the period. The colds in each group were tabulated according to the patient's opinion of the severity, the severity of the objective symptoms, the duration of the cold and the patient's opinion as to the com-

parison between this cold and previous ones for severity or duration. There was no indication of any difference between the groups on the basis of any of these comparisons.

A number of the students reported "reactions" to the medication, this included seven of the group receiving the placebo, seven in the group taking ascorbic acid, 12 taking phenindamine, 13 taking phenindamine plus ascorbic acid and 13 taking tripelennamine hydrochloride.

Ethylene Glycol

Chronic Intoxication by Ethylene Glycol Vapour by F. M. Troisi. British Journal of Industrial Medicine 7:65-69 (April 1950).

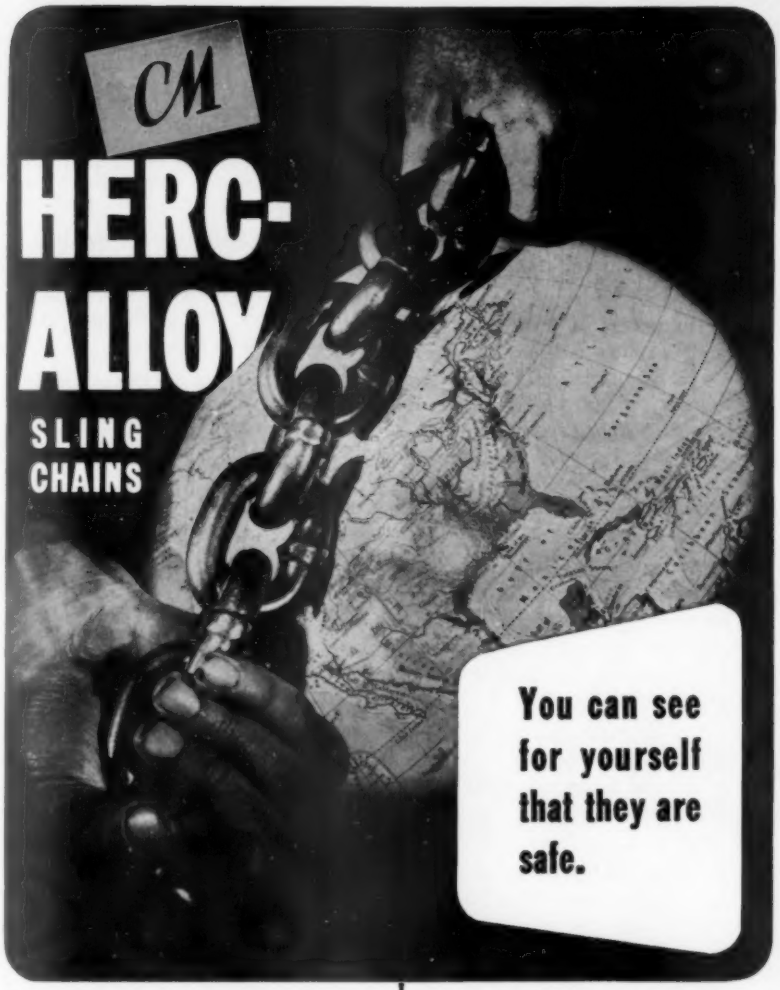
Of 38 women working at the impregnation of paper for electrolytic condensers nine were subject to attacks of fainting which recurred, on the average, two or three times per week. They would pass suddenly into unconsciousness and apparently remain in a profound sleep for five to ten minutes, after which they would awaken just as rapidly and apparently become perfectly normal.

Examination of the women in the department showed these nine and five others to be subject to nystagmus and blood counts on five of the women subject to fainting showed a slight lymphocytosis in every case.

The operation was brushing a mixture of ethylene glycol, boric acid and ammonia upon the paper. The mixture was held in receptacles in the center of the table, heated to 105C, while the women worked along both sides at a distance such that they could reach the receptacles conveniently. There was no local ventilation and the ethylene glycol vaporized appreciably at the temperature at which it was being used.

Two of the women were transfered to another department and both the fainting and the nystagmus disappeared. The remainder remained on the job as it was already planned to install ventilation. Their fainting spells and nystagmus disappeared with the installation of the local exhaust.

Conscience: The still small voice that tells you somebody's looking.



● Just one of the big advantages of HERC-ALLOY Sling Chains is that you can determine their serviceability by a simple visual inspection.* Ordinary steel or iron chains, on the contrary, grow dangerously brittle with age . . . an insidious threat to the safety of men and materials. That's why more and more of the important companies are standardizing on HERC-ALLOY Sling Chains . . . because you can **see** for yourself that they're safe.

*Write for your copy of this new, informative booklet. No charge.

HERC-ALLOY FEATURES

- America's *first* alloy steel sling chain . . . first to bear a serial number.
- *Every* CM HERC-ALLOY Sling Chain is alloy steel throughout . . . links, rings, hooks. There is only one grade . . . *the best.*
- Every chain is individually tested and accompanied by a certificate of registration.
- Links are side welded for maximum strength by patented INSWELL electric method.
- HERC-ALLOY Chains should *never* be annealed.
- HERC-ALLOY Chains are lighter . . . stronger . . . easier to handle . . . outlast ordinary chains 4 to 5 times . . . cost less on the job.

HERC-ALLOY. . . the chain you can *SEE* is safe

COLUMBUS-McKINNON
CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: New York • Chicago • Cleveland • San Francisco • Los Angeles

Safety Behind The Iron Curtain

Safety and health in Russian industry, like other conditions in the USSR, have been a matter of considerable speculation, but little definite information has reached the western world.

On paper, at least, the Soviet program for education, research and the protection of the industrial worker on the job have been developed with exceptional thoroughness. How the program works out in actual practice, however, is another matter and authentic reports are meager.

A mimeographed document, whose source cannot be given, presents some quotations which indicate that standards of safety and health under Soviet rule are deplorably low.

For external consumption a public lecture by Nikolai Gaisenok, a prominent trade union leader, has been summarized by *Radio Moscow:*

"The great gains of the Soviet workers in the field of labor protection are recorded in special labor legislation and in numerous safety rules and standards of industrial hygiene and labor protection which are binding on every Soviet industrial establishment. No enterprise in the USSR can be commissioned unless all safety rules are complied with . . . "

However, such statements differ from those the Soviets issue for internal consumption, in response to obviously lax work on the part of the various departments of labor and protection of the several trade unions.

Items quoted from a publication called *Trud* do not confirm Gaisenok's statements. For example:

In the eastern coal-mining regions little concern is shown about bettering the ventilation in the mine shafts.

The trade union organizations are putting up with unfulfillment of the collective agreements in safety measures and protection of labor. Many mines do not have the mechanical conveyances to take workers in their place of work. In certain shafts, in order to reach the cutting level, workers are required to travel two or three kilometers on foot.

In many industries, it has been found that special clothing for protection against heat, cold, action of chemicals, etc., is of poor quality and high in price.

. . . a survey by the Department of Labor Protection of the All-Union Council of Trade Unions, with the help of government experts revealed that clothing of unsatisfactory quality was being manufactured by the enterprises of the local industries and industrial cooperatives of the RSFSR. Much special work clothing destined for sale to workers lies on the shelves of the enterprises because of its low quality and high price . . .

In many enterprises there are no closets in which to hang special clothes after work. Since in many cases there are no organized facilities for washing and mending these clothes, it is usually preferred to buy new ones rather than to fix the old ones. Such practices are expensive to the government.

Contrary to common practice in most industrial establishments of the western countries, the Soviet worker must provide his own special clothing at his own expense.

Another enemy of safety is the speed-up system enforced on Soviet labor which causes them to ignore regulations and even remove such safety devices as have been installed. Between speed and safety, speed takes priority. Stakhonovites and other speed workers tinker with their machines, removing governors, to make them go faster. According to an article by N. Kholmin in *Trud*, May 13, 1950, the Stakhonovite is left pretty much on his own with regard to observing safety measures in the drive for higher production.

Many lathe and milling machine operators try to set the machines at high speeds. But this is not a simple matter. The innovators have to overcome serious difficulty. The molten shavings, splattering from under the knife, cause the lathe operators a great deal of trouble; and fragments of the cuttings fly quite far out at the milling machine operators.

The Stakhonovites and specialists designed a number of shaving-winders, catchers, screens, etc., but the technical heads did not pay any attention to them.

Apparently, the document asserts, the Soviets have not even arrived at any basic decisions regarding safety measures, so it is not surprising that adequate devices are not applied on a wide scale.

Calendar Contest Winners For June

First prize in the National Safety Council's Safety Calendar Contest goes this month to A. F. Carlson, Socony-Vacuum Oil Co., Inc., East Chicago, Ind. The theme in this contest was keeping cars in safe condition. Mr. Carlson's two-line rhyme was adjudged best of all those submitted. It was:

This shouldn't happen to you, but it might
Only you can prevent it, so keep your car right!

Second prize went to Mrs. Ernest Grider, Indianapolis, Ind., for this rhyme:

For value received—there's no surer protector,
Than the check that's been signed by a safety inspector.

Third prize was awarded to Leon Nichols, railway mail clerk, Worcester, N. Y., for the following rhyme:

Have everything safe before you start [illegible]'er,
Don't let your machine be a come-aparter.

Thirty $5 awards were issued to:

Mrs. Matthias C. Taugner, stenographer, U. S. Dept. of Commerce, Washington, D. C.

Mrs. Winnifred Senning, Tucson, Ariz.

H. Louise Swenberg, Red Wing, Minn.

Mrs. Thomas Spain, Nashville, Tenn.

Mrs. Marie Hasund, Missoula, Mont.

Betty Traffas, Sharon, Kan.

Mrs. N. F. Benson, San Bernardino, Calif.

Mrs. Grace Martin, Pawtucket, R. I.

Mrs. J. L. Rolls, Hamilton, Ont., Canada

Ada Nelson, Milford, Nebr.

Mrs. V. G. Feldbauer, St. Mary's, Pa.

Mrs. A. J. Pierre, Dayton, Ohio

Milton J. Brown, La Crescenta, Calif.

J. G. Greene, machine operator, Caterpillar Tractor Co., Peoria, Ill.

Hugh Pennock, Longmont, Colo.

Ladie Will Ramsey, secretary, Civil Aeronautics Admn., Atlanta, Ga.

Mrs. R. E. Ricketts, Madison Heights, Va.

Dorothy V. Goyne, technical library,

Kelly Air Force Base, San Antonio, Tex.

W. G. Castle, Sharples Chemicals, Inc., Wyandotte, Mich.

Eleanor Blake, Staten Island, N. Y.

J. M. Slosarcik, Socony-Vacuum Oil Co., Inc., East Chicago, Ind.

R. Cheyne-Stout, Orlando, Fla.

Estelle Chandler, Morgantown, W. Va.

John A. Stewart, YMCA secretary, Cleveland, Ohio

Odin Toness, Development Dept., U. S. Rubber Co., Detroit, Mich.

James Harvey, Howard Smith Paper Mills, Ltd., Ont., Canada

Gwen Davis, Missoula Mercantile Co., Missoula, Mont.

Mary E. Woodman, Feasterville, Pa.

Lee Hill, railway mail clerk, Sidell, Ill.

Mrs. Ned Fish, secretary, Dept. of Chemistry, Univ. of Missouri, Columbia, Mo.

A new contest is offered each month through the safety calendar.

The President's Medal

Awards made by the National Safety Council for resuscitation by the Prone Pressure Method

NORMAN C. CAIRD, lineman, The Hydro-Electric Power Commission of Ontario, Maple, Ont., Canada.—drowning.

BENNETT D. DUGAN, station installer, Michigan Bell Telephone Co., Romulus, Mich.—drowning.

HERMAN JANTZEN, truck driver and groundman, Wisconsin Power and Light Co., Spring Green, Wis.—electric shock.

RAYMOND R. HOFFERT, SR., power house foreman, Bethlehem Steel Company, Bethlehem, Pa.—drowning.

JOHN C. HOLT, head roustabout, Stanolind Oil & Gas Co., North Cowden, Texas—asphyxiation.

ARTHUR LEE WATSON, apprentice, Mitchell Dam, Alabama Power Co., Verbena, Ala.—drowning.

TATE W. KIMBROUGH, student operator, generating plant, Tennessee Valley Authority, Savannah, Tenn.—electric shock.

J. W. SCRIVNER, employee, The Texas Company, Long Beach, Calif. — strangulation. Certificate of assistance to MRS. MARGARET MONTGOMERY.

J. L. APPERSON, lineman, Nash-

Make These Difficult Cleaning Jobs Simple!

Clean fast, Easily

with

DIVERSEY

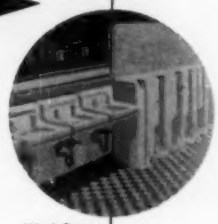
ELEKTRO-PURJ-IT

Multi-purpose Cleaning Compound

Costs Less Than 2 cents a Gallon

Walls and Woodwork

Factory Reflectors



Wash Rooms

Machinery

Factory Floors

Sky Lights

Now clean-up crews everywhere can make their job surprisingly easy, simple and fast! In literally thousands of plants throughout America, Diversey Elektro-Purj-It has proved its superiority over other general cleaners! Think of it! Elektro-Purj-It solutions actually cost less than 2 cents per gallon . . . yet loosen dirt and grease as fast as lightning and easier than you ever hoped possible!

Elektro-Purj-It is dustless and non-caking . . . convenient to use. Why not make your job easier? Investigate Elektro-Purj-It today. Mail the coupon below for *free* samples.

THE DIVERSEY CORPORATION

Maintenance Products Department

1820 Roscoe Street • Chicago 13, Illinois

***IN CANADA:* The Diversey Corporation (Canada) Ltd. Toronto, Ontario**

FREE SAMPLE! See for yourself how amazingly fast, easy and simple general cleaning really can be. Select a tough cleaning job in your plant and compare Elektro-Purj-It with any other cleaner. See the difference on one of your own cleaning problems! Mail this coupon for your *free* sample. No obligation.

DI-1

NAME_____

TITLE_____

COMPANY_____

STREET_____

CITY_____ STATE_____

If you've ever been up on a 50-foot stick when your life depends on the quality of the belt and safety strap you use, you will appreciate the high quality and care that is so much a part of all Klein equipment. When life's at stake, there can be no compromise with quality. Old timers know that Klein equipment has stood for quality in linemen's tools and equipment—"since 1857."

ASK YOUR SUPPLIER

Foreign Distributor:
International Standard Electric Corp.
New York

If you have not received a copy of the new Klein Pocket Tool Guide, write for one. It will be sent without obligation.

Mathias Klein & Sons
Established 1857
Chicago, Ill., U.S.A.
3300 BELMONT AVENUE CHICAGO 18, ILLINOIS

ville Electric Service, Nashville, Tenn.—electric shock. Certificates of assistance to J. B. GILL and G. S. MCCANLESS.

COMING EVENTS

In the Field of Safety

Sept. 14-15, York Harbor, Me.
Twenty-third Annual Maine State Safety Conference. (Marshall House). A. F. Minchin, director, Industrial Safety Division, Department of Labor and Industry. Augusta, Me.

September 19-21, Cleveland, O.
Twelfth Annual Ohio State Safety Conference. (Hotel Carter). Carl L. Smith, secretary-treasurer, Suite 508, 2073 E. 9th St., Cleveland 15, Ohio.

Sept. 25-26, Little Rock, Ark.
Arkansas State Safety Conference. (Hotel Marion). Harvey D. Booth, executive director, Arkansas Safety Council, P.O. Box 2261, Little Rock, Ark.

Oct. 2-6, Atlantic City, N. J.
American Gas Association, Annual Convention. H. Carl Wolf, managing director, 420 Lexington Ave., New York 17.

Oct. 16-20, Chicago
Thirty-eighth National Safety Congress and Exposition. (Stevens Hotel). R. L. Forney, general secretary, National Safety Council, 425 North Michigan Ave., Chicago 11.

Dec. 11-12, New Orleans, La.
Louisiana Safety Association, Annual Meeting. (Roosevelt Hotel). Col. Charles E. Doerler, secretary, Louisiana Safety Association, Box 806, Shreveport, La.

Apr. 3-6, New York
Twenty-first Annual Greater New York Safety Convention and Exposition. (Hotel Statler). Paul F. Stricker, executive vice-president, Greater New York Safety Council, 60 East 42nd Street, New York 17.

Apr. 24-26, Chicago
Twenty-eighth Annual Midwest Safety Conference. (Congress Hotel). Joseph F. Steeh, manager, Greater Chicago Safety Council, 10 N. Clark St., Chicago 2.

Apr. 24-26, Pittsburgh, Pa.
Twenty-sixth Annual Western Pennsylvania Safety Conference and Exhibit. (William Penn Hotel). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, 605 Park Building, Pittsburgh 22, Pa.

THE HONOR ROLL

Records of operation exceeding 500,000 man-hours, or one year, if exposure exceeds 250,000 man-hours, without a disabling (lost-time) injury are invited.

American Can Co.
Philadelphia Factory, Philadelphia, Pa.—May 11, 1949 to June 29, 1950; 800,000 man-hours, continuing.

American Zinc Co. of Tenn.
Mascot No. 2 Mine, Mascot, Tenn.—November 22, 1948 to May 13, 1950; 599,440 man-hours.

Brown-Forman Distillers Corp.
Blue Grass Cooperage Division, Louisville, Ky.—695,568 man-hours.

Department of the Army
Jeffersonville Quartermaster Depot—November 23, 1949 to April 30, 1950; 222,764 man-hours, continuing.

Memphis General Depot—January 16, 1950 to April 30, 1950; 671,481 man-hours, continuing.

New Cumberland General Depot—January 1, 1950 to April 30, 1950; 581,214 man-hours, continuing.

New York Quartermaster Procurement Agency—January 1, 1950 to April 30, 1950; 2,761,219 man-hours, continuing.

Philadelphia Quartermaster Depot—March 4, 1950 to April 30, 1950; 1,478,805 man-hours, continuing.

Schenectady General Depot—March 10, 1950 to May 1, 1950; 703,461 man-hours.

Ethyl-Dow Chemical Co.
Texas Division, Freeport, Tex.—April 5, 1949 to May 31, 1950; 340,533 man-hours, continuing.

General Electric Co.
Test Sec., Commercial Equipment Div., Electronics, Dept., Syracuse, N.Y.—June 2, 1947 to June 18, 1950; 1,451,496 man-hours, continuing.

Industrial Rayon Corp.
Cleveland Plant, Cleveland, Ohio—November 28, 1949 to May 10, 1950; 1,005,364 man-hours.

Longview Fibre Co.
Longview Plant, Longview, Wash.—July 28, 1949 to May 23, 1950; 2,612,656 man-hours, continuing.

Bag Converting Dept., Longview Plant—June 14, 1947 to May 12, 1950; 1,000,000 man-hours, continuing.

Nekoosa-Edwards Paper Co.
Port Edwards Mill, Port Edwards, Wis.—March 4, 1950 to June 18, 1950; 792 employees, 504,854 man-hours, continuing.

Republic Steel Corp.
Order and Shipping Dept., Youngstown Dis., Youngstown, Ohio—May 27, 1949 to May 27, 1950; 1,522,834 man-hours.

Syracuse Chilled Plow Co., Inc.
Syracuse, N.Y.—April 27, 1949 to June 16, 1950; 507,000 man-hours.

Tennessee Prod. & Chem. Corp.
Coke and Chemical Div., Chattanooga, Tenn.—May 28, 1949 to May 27, 1950; 442,894 man-hours, continuing.

Union Carbide and Carbon Corp.
Main Plant, Haynes Stellite Div., Kokomo, Ind.—July 26, 1947 to March 22, 1950; 7,407,010 man-hours.

United States Rubber Co.
Winnsboro Mills, Winnsboro, S. C.—December 16, 1949 to May 30, 1950; 1,385 employees.

University of California
Los Alamos Scientific Laboratory, Los Alamos, N. M.—April 17, 1950 to July 3, 1950; 1,000,000 man-hours, continuing.

New York Conference To Be Held April 3-6

New York's twenty-first annual Safety Convention and Exposition will be held from April 3 through April 6, 1951. It will be sponsored by the Greater New York Safety Council, with 65 national and local organizations, including Government agencies, as cooperating organizations.

Announcement of the dates for the 1951 convention was made by Harold K. Kramer, president of the Greater New York Safety Council. Mr. Kramer announced also the appointment of John Cost as general chairman for the convention. Mr. Cost is division plant personnel supervisor of the New York Telephone Company.

Even the rattler's warning frequently is heard too late. Three other deadly reptiles common in the U. S.—the moccasin, the copperhead and the coral snake—give no warning at all! Workmen located in timber, swamp lands or rough country need protection against this lurking danger!

McDonald
SNAKE BITE KIT

WRITE FOR INFORMATION AND PRICES

A handy kit with all the materials for instant, safe treatment of snake bites. Powerful suction pump with two adaptors—operates with one hand. Real surgical lancet, tourniquet, antiseptic, adhesive compress, shock treatment. Full directions on inside cover of kit. Fits pocket on standard unit kits.

B. F. McDONALD CO.
Manufacturers & Distributors of Industrial Safety Equipment
Safety FROM HEAD TO TOE
5112 South Hoover Street
Los Angeles 37, California
Other Offices in San Francisco & Houston

Industrial 200-14L

There's a *Big* difference between Asbestos Gloves and you can *tell* the difference when you get Industrial's 200-14L asbestos gloves. *The quality stands out in* your hands and *on* your hands. Seamless one piece construction from tip to top. No seams at the wrist or working edges to pull out or burn out just when protection is needed most on a hot job. The 200-14L has a knitted cotton lining (not woven) anchored in each finger and in thumb. *The quality stands out* in the correct design and proportions of the big roomy pattern that allow a cool, comfortable fit. They are double sewn. Standard 11, 14 and 23 inch lengths. Other lengths and many special types of asbestos gloves and mittens are available both lined and unlined. The quality of all these items stands out because they are all made of sturdy, close woven 2½ pound per square yard Underwriters grade Asbestos cloth . . . from the best mills in the United States.

Be safe—use Industrial's Safety Apparel backed by 40 years of experience and know-how that means dependable low cost protection for rough, tough service.

We are designers and manufacturers of a complete line of Industrial Safety Apparel. Write for catalog and tell us your requirements.

Industrial
GLOVES COMPANY
A CORPORATION

Main Factory: 1728 Garfield St., DANVILLE, ILL.
(In Canada: SAFETY SUPPLY CO., Toronto)

"Rain Makers" May Help Control Forest Fires

With an increase of 20,000 forest fires in 1949, the U. S. Forest Service is looking hopefully to the "rain-making" scientist for relief for dry-lightning storms which start a great number of forest fires in a short time. A. A. Brown, U. S. Forest Service, Washington, D. C., told the Fifty-fourth Annual Meeting of the National Fire Protection Association that dry-lightning storm fires have always heretofore been considered unpreventable, but that with current "rain-making" experiments this may change.

Said Brown: "Drs. Langmuir and Shaeffer, the famous electric scientists, have discovered supercooled vapor in the clouds and ways of causing it to precipitate. The charge of electricity is not generated until the lightning cloud builds up above the freezing level. There is a chance to break up such local storms before they reach that stage by overseeding them, and there is a chance that this will prove practical. We are also hopeful that the new work that has been going on in seeding clouds to cause precipitation may have value at times in forest fire fighting where even small changes in the humidity of the air and its temperature are often of great importance in the behavior of a forest fire."

The Reader's Point of View

Comments on topics of current interest are always welcome. They need not agree with the opinions of the editors.

Safety Meetings

Montreal, P. Q.—The Industrial Safety Panel in the June NATIONAL SAFETY NEWS has been read with interest and appreciation.

It is a matter of some surprise that the outstanding value of safety meetings as perhaps the best medium of safety education yet known is not more strongly stressed. While such meetings may be wasteful of time if poorly handled, in no other way can men and women receive such direct education in the value and purpose of safety as through well conducted group meetings.

Methods of conducting meetings and the number of persons attending them may vary widely but, large or small, these meetings will be successful if they are thoughtfully prepared and presented with a definite purpose in mind.

Visual aids, such as films, safetygraphs, demonstration boards, models and so forth, all serve to increase interest and stimulate thought. However, films particularly should be considered only as an aid, a supplement to the matter being discussed. If films are shown just as films there is an inclination to accept them as a type of entertainment and their value as a medium of instruction may be lost.

When discussion is possible it should be encouraged. Participation through discussion affects acceptance, and so the success of any meeting.

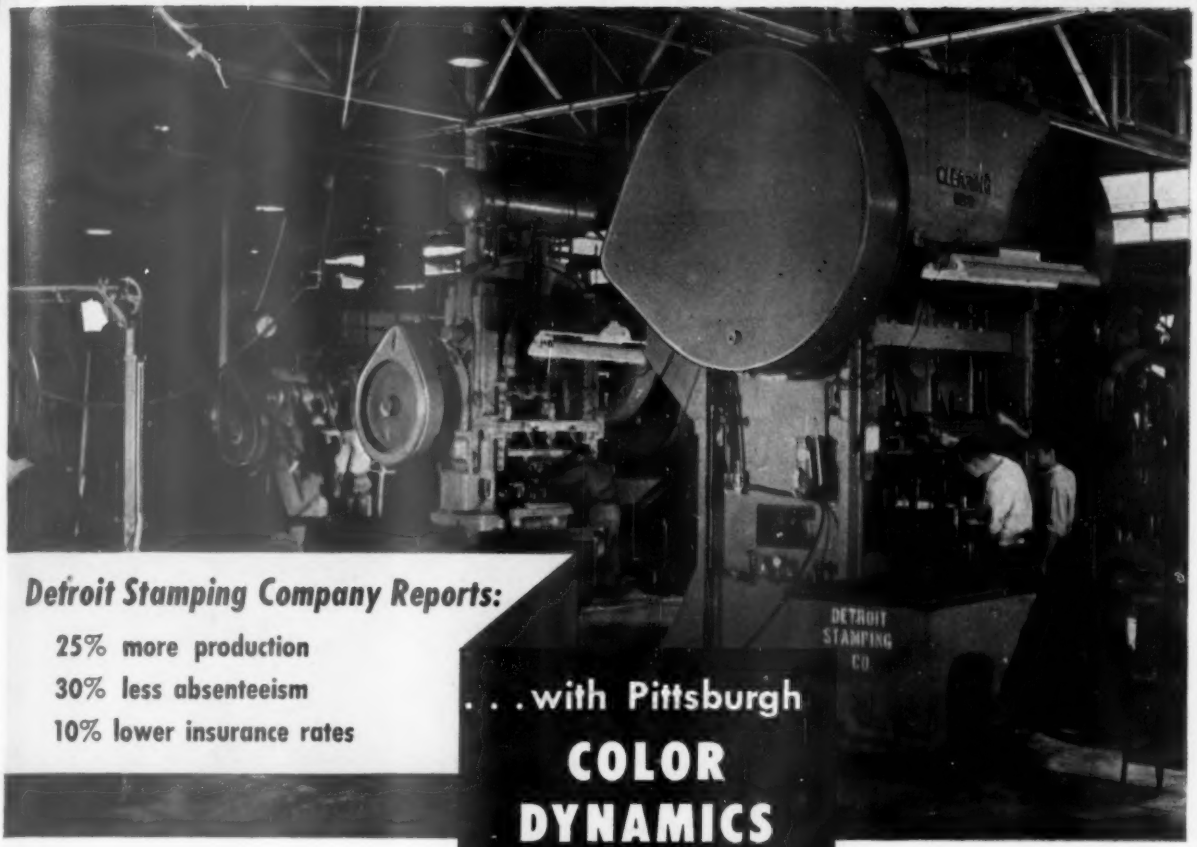
There is real merit in having an occasional guest speaker. This will often give new vigor to the group's safety endeavor.

The view expressed that the safety supervisor should not be the leader in safety meetings is, in our view, to a large extent correct. Meetings are more effective when conducted by the operating superintendent. The safety man should be ready to assist in the preparation of the material for the meeting and should stand by (behind the scene, as it were) ready with facts and figures to support the leader.

It should be a primary objective of safety supervision to convince men and women of the purpose of safety. When they fully understand that its true purpose is to protect their own lives and the welfare of their families, then, it seems to me, the resistance to safety work so often evident would soon disappear. To bring this about the safety meeting is a medium second to none.

May I thank the National Safety Council for a great deal of help and wish it even greater success in the future.

CHARLES E. RICKETTS
Plant Safety Supervisor, E.A. Bell Telephone Co. of Canada



Detroit Stamping Company Reports:

25% more production
30% less absenteeism
10% lower insurance rates

. . . with Pittsburgh

COLOR DYNAMICS

Higher efficiency, better morale and greater safety are traced directly to use of modern scientific painting system

DETROIT Stamping Company is another example of how Pittsburgh COLOR DYNAMICS, applied in accord with good planning, can pay off — in greater production efficiency, better morale and improved safety.

● **Three years ago** this manufacturer of metal stampings and assemblies for motor cars and household appliances decided to apply COLOR DYNAMICS. An interior decorating scheme was adopted in accordance with the principles of the *energy in color*. An over-all treatment was chosen to give better lighting and, at the same time, produce a visible effect of order, cleanliness and efficiency. Functional colors were used on machines to make jobs easier to see and reduce accidents.

The benefits that have resulted to management and labor alike from Pittsburgh COLOR DYNAMICS are best expressed by Harry C. Robeson, Plant Manager.

● **"Since we repainted,** according to COLOR DYNAMICS, the volume and quality of production have been increased 25 per cent without stepping up manufacturing costs", writes Mr. Robeson.

"Employees can see their work better than ever before. They don't tire as quickly, nor do they get hurt as much. We haven't had a serious accident since repainting. We were awarded special recognition in each of the past two years for our splendid safety record. As a result our insurance rates have been cut more than 10 per cent.

● **"COLOR DYNAMICS has** greatly improved morale, especially among our female employees, whose rest rooms were made more cheerful and pleasant. Absenteeism among all workers has been reduced 30 per cent.

"Our entire staff also takes greater interest and pride in plant cleanliness, simplifying our housekeeping problems."

How you can get a COLOR DYNAMICS Engineering Study of Your Plant — FREE!

Why not try COLOR DYNAMICS in your plant—on a machine or two, or in one department. We'll be glad to make a scientific color engineering study for you FREE and without obligation.

There's a trained color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send the coupon below.

SEND FOR A COPY OF THIS BOOK!

Pittsburgh Plate Glass Co., Paint Div., Department NS-80, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your Booklet *"Color Dynamics In Industry."*

☐ Please have your representative call for a Color Dynamics Survey of our properties without obligation on our part.

Name _____

Street _____

City _____ *County* _____ *State* _____

PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

SAFETY POSTERS

from
NATIONAL SAFETY COUNCIL

IMPORTANT

All posters displayed on these pages, except the jumbo poster, will be available through 1950, and may be secured as a part of N.S.C. membership service, or by purchase.

Posters numbered 8800 and up are new posters. Others are among the 774 posters shown in the 1950 Poster Directory.

Write to Membership Dept. of N.S.C. for further information.

NATIONAL SAFETY COUNCIL

9070-A 8½x11½

NATIONAL SAFETY COUNCIL

6829-A 8½x11½

NATIONAL SAFETY COUNCIL

8790-A 8½x11½

NATIONAL SAFETY COUNCIL

8476-A 8½x11½

NATIONAL SAFETY COUNCIL

8686-A 8½x11½

NATIONAL SAFETY COUNCIL

7973-A 8½x11½

Electrotypes or poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)

NATIONAL SAFETY COUNCIL

9099-C **25x38**

Jumbo posters 9′ 11″ by 11′ 8″ in size, designed for outdoor use, are issued monthly. They are available to members for $42.50 annual subscription.

NATIONAL SAFETY COUNCIL

8939-A **8½x11½**

NATIONAL SAFETY COUNCIL

8977-A **8½x11½**

NATIONAL SAFETY COUNCIL

9006-A **8½x11½**

NATIONAL SAFETY COUNCIL

9084-A **8½x11½**

NATIONAL SAFETY COUNCIL

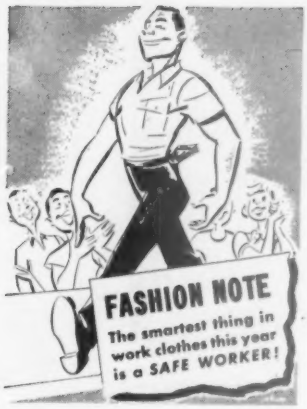
9015-A **8½x11½**

NATIONAL SAFETY COUNCIL

8988-A **8½x11½**

See box on page 66 for information about these and other National Safety Council posters.

Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL

9086-A 8½x11½

NATIONAL SAFETY COUNCIL

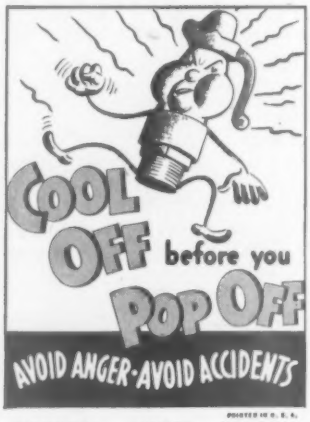
8774-B 17x23

NATIONAL SAFETY COUNCIL

9081-A 8½x11½

NATIONAL SAFETY COUNCIL

9012-A 8½x11½



NATIONAL SAFETY COUNCIL

9017-A 8½x11½

NATIONAL SAFETY COUNCIL

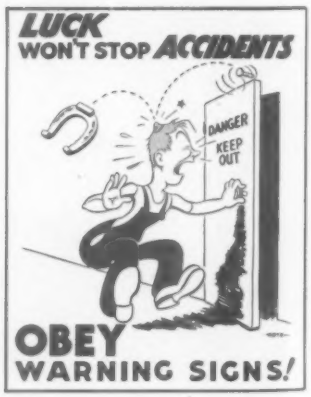
8200-B 17x23

NATIONAL SAFETY COUNCIL

9013-A 8½x11½

NATIONAL SAFETY COUNCIL

8982-B 17x23



NATIONAL SAFETY COUNCIL

8633-B 17x23

See box on page 66 for information about these and other National Safety Council posters.

Posters below are printed in two or more colors
(Available only in sizes indicated)

8634-A 8½x11½

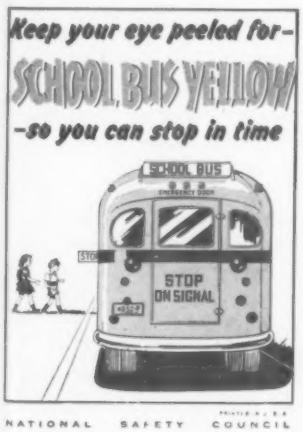
6317-A 8½x11½

8978-A 8½x11½

8952-B 17x23

8998-B 17x23

8699-A 8½x11½



V-9095-B 17x23

V-8734-A 8½x11½

DEFENSIVE DRIVING TIPS
If the vehicle ahead is-
• crowding the center line
• reducing speed
• giving a left turn signal
SLOW DOWN and BE PREPARED TO STOP
NATIONAL SAFETY COUNCIL

V-9094-A 8½x11½

See box on page 66 for information about these and other National Safety Council posters.

"Freight Handling Safety"

How to handle freight safely is the subject of a new Council training film available in both sound slide and slide motion versions. (The latter is on regular 16 mm movie film with sound track.) Each is introduced by a cartoon sequence which in the slide motion version is semi-animated.

"Freight Handling Safety" uses a series of case histories to show material handlers the importance of safe dress, especially gloves and safety shoes, the need for securing help in handling heavy loads, and the reason for anchoring dock plates.

Why accidents occur when freight handlers lift unsafely, neglect to cross-tie material, fail to work as a team, slip up on removing sleepers, and pull, instead of push, four-wheel hand trucks is illustrated by other specific cases. The description of each accident is followed by a demonstration of the way in which it could have been prevented by use of the safe method.

Both the 35 mm sound slide film and the 16 mm slide motion film have a running time of 15 minutes. Prices on request.

Power Lines

"Three Men Killed When Crane Boom Hits Power Lines" is the title of a new six-page leaflet on the hazards encountered by men working near overhead or underground power lines.

Printed in blueprint blue, the leaflet uses photographs and concise copy to point out the equipment which may come in contact with power lines, the precautions to be taken by workmen, and the importance of consulting the local power company before excavations are begun.

Copies of the leaflet can be distributed as reminders of a serious hazard to employees of construction and quarry companies. Companies in other industries can provide copies for the employees of contractors they hire.

Public utilities can use the leaflet as a convenient means to inform local contractors of the seriousness of the problem and of the necessary precautions. Trade associations, manufacturers of construction equipment, and municipalities will also find the leaflet useful in their accident prevention programs.

The leaflet is 3½ inches by 8½ inches, a handy size for mailing. Imprint space is provided on the cover.

Member prices: 1 to 9 copies, 5 cents each; 10 to 99, 4 cents each; 100 to 999, 3 cents each; 1000 to 4999, 2½ cents each; 5000 to 24,999, 2-2/10 cents each; 25,000 or more, 2 cents each.

New Series for Foremen

A brand-new series of booklets for foremen, "Psychology of Safety in Supervision," analyzes the human factors in accident prevention and tells the supervisor how to understand them and put them to work. While explaining in direct, readable fashion the basic principles of human behavior, the booklets at the same time show how to train new workers, how to keep experienced workers alert, how to win respect and cooperation.

The author of the series is J. L. Rosenstein, Ph.D., industrial psychologist and professor in the Department of Management, Loyola University, Chicago. Dr. Rosenstein is well known as a popular Congress speaker and as a consultant to industry on the psychology of accident prevention.

The series comprises six booklets of eight pages each (with separate covers), which bear the following titles: "You Can't Change Human Nature," "What Is Your U.Q.," "Teaching Safety on the Job," "People Act Alike," "Safety Takes Teamwork," and "You Are Human, Too."

Since the series has been planned for either individual or group study, a discussion leader's manual is provided. Used as the basis for a training course for supervisors, the series will stimulate lively discussion on how to handle people.

Printed in two colors, the booklets are 6 inches by 9 inches, illustrated with cartoons from the "Human Factors in Safety" foremanship films.

Member prices: 1 to 9 sets, 90 cents each; 10 to 99, 85 cents each; 100 to 999, 80 cents each; 1000 or more, 75 cents each.

Operation Safety Leaflet

"Know Your Signs of Life" is the title of the August Operation Safety leaflet, which features a road sign quiz. For information about the complete Operation Safety kit for August, write the Traffic and Transportation Division of the Council.

News Index

The Index for NATIONAL SAFETY NEWS from January to June, 1950, is now available and will be sent upon request to Council headquarters.

NSC Publications to Be Available on Microfilm

The National Safety Council has entered into an agreement with University Microfilms, Ann Arbor, Mich., to make available to libraries issues of a number of Council publications in microfilm form.

One of the pressing problems facing all libraries today is that of providing adequate space for a constant flood of publications. Periodicals pose an especially difficult problem because of their bulk and number.

Microfilm makes it possible to produce and distribute copies of periodical literature on the basis of the entire volume in a single roll, in editions of 30 or more, at a cost

approximately equal to the cost of binding the same material in a conventional library binding.

Under the plan, the library keeps the printed issues unbound and circulates them in that form for from two to three years, which corresponds to the period of greatest use. When the paper copies begin to wear out or are not called for frequently, they are disposed of and the microfilm is substituted.

Sales are restricted to those subscribing to the paper edition, and the film copy is only distributed at the end of the volume year.

The microfilm is in the form of positive microfilm, and is furnished on metal reels, suitably labeled. Inquiries concerning purchase should be directed to University Microfilms, 313 North First Street, Ann Arbor, Mich.

Council publications covered in the agreement include: NATIONAL SAFETY NEWS, PUBLIC SAFETY and SAFETY EDUCATION.

Awards Presented to ASA Directors

ROBERT I. CATLIN, vice-president, Aetna Casualty & Surety Company, Hartford, and CURTIS W. PIERCE, president, Factory Insurance Association, New York, were awarded certificates for outstanding service in standardization. Thomas D. Jolly, president of the American Standards Association, presented the awards at the annual President's Luncheon of the ASA in New York, June 22.

Mr. Catlin, a member of the ASA Board of Directors, is a former vice-president of the National Safety Council and was nominated by the Council as a member of the ASA Board. He has also served as chairman of the Connecticut State Highway Safety Commission.

Mr. Pierce is a past president of the National Fire Protection Association and manager of the National Bureau for Industrial Protection. The functions of this Bureau were to make available to all interested government agencies during World War II, technical information and services available to the insurance business of America.

This is to Certify...
REGISTERED SLING CHAIN ACCO
IDENTIFICATION RING
REACH
This drop-forged ring is permanently attached to each ACCO Registered SLING CHAIN. All essential identifying information shown on both sides of ring, as illustrated, protected by the outer flange.
ACCO Registered SLING CHAIN
SEND for this catalog which contains information on how to select, use and care for sling chains. It is DH-80.
ACCO
● The right sling chain for the job is the safe one. The wrong sling chain might be a hazard—to men, materials and equipment.
In ACCO Registered SLING CHAINS, you have a selection of types, sizes and materials to best meet the needs of any application—plus the assurance that every sling that carries the Identification Ring has been fully tested and rigidly inspected.
AMERICAN CHAIN—"The Nation's Chainmaker"—feels the responsibility of positively identifying every sling chain that leaves the plant.
ACCO
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.
AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE
TRADE MARK
In Business for Your Safety

Tools for Manual Handling of Pulpwood and Logs

(From page 30)

the place at which it is aimed, unless the worker corrects for the hook distortion. For the same reason, it is necessary to keep the hook point in the same plane with the shank, and a template can help to meet this requirement, too.

22. The hook should be kept sharp, but if by repeated sharpening the point is worn down too far, the efficiency of the hook may be affected. When the point has been worn down to the extent shown in Figure 5, it should be replaced or the hook should be redrawn. A file should be used to touch up points. Use of a grinding wheel by unskilled persons may alter the temper of the steel.

23. *Method of use.* From the accident cause summaries shown in Tables I and II, it is apparent that large improvements in the accident record will result only from some method of preventing the wood hook from glancing off logs or pulling loose from logs. Also, in an appreciable number of cases, the worker completely misses the log and strikes himself.

24. First of all, therefore, workers should be taught, by demonstration, to aim the hook and swing it so that it strikes squarely into the wood instead of bouncing off. One suggestion is that the hook be held in such a way that when it becomes imbedded in the wood it will be precisely in position for carrying or lifting, or whatever the next step is, without having to be adjusted. Also, the hook should be struck hard enough to drive through the bark (and, in the case of frozen wood, through the ice) into the wood underneath.

25. When a log is to be lifted, the hook should be driven into the end of the log—never the middle. (See Figure 6.) The hook should not be driven into knots, for the point may stick at the time of intended release and throw the worker off balance. Workers should be instructed to let go of the hook if it sticks.

26. The worker should stand so that no part of his body is in the line of swing or near the place where the hook will go if it glances or bounces off. Furthermore, the number of cases in which men have been struck by fellow workers' wood hooks indicates that supervisors should make certain that men are not working within hook range of one another.

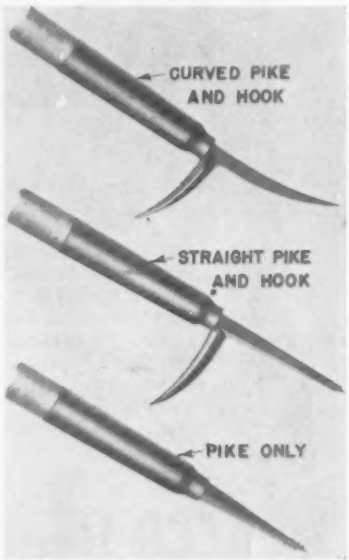


Figure 10. Three types of pike pole. (Courtesy Warren Axe and Tool Company).

27. To prevent back injuries, the user of wood hooks should lift with the leg muscles as much as possible. The back should be kept straight and as nearly vertical as practical. When swinging the log, the worker should not twist his body because this motion may induce back strain.

28. The average man cannot use a "body lift" higher than a hand grip, about 32 inches from foot level; nor can he easily tier wood higher than 5½ feet from the level on which he is standing.

29. *Injuries and protective equipment.* A study of wood hook injuries from the standpoint of the part of the body involved shows that about 50 per cent occur to the legs between the knee and ankle. About 10 per cent occur to the thigh. Twelve per cent occur to the hands, 23 per cent to the arm between the wrist and shoulder, and 6 per cent to the face.[3]

30. Injuries from logging tools are usually puncture wounds. Infections frequently develop, for punctures are more likely to become infected than other kinds of wounds.* Often hook punctures appear small on the skin surface, but frequently the point penetrates deeply and drives with it dirt, clothing, or bits of wood. Prompt medical care should be given to all hook wounds.

31. On the forearm, knee, shin, or ankle where the flesh covering is thin, the point of the hook may penetrate the periosteum or white covering of the bone, a type of wound which heals slowly.**

32. Since most wood hook injuries occur to the legs, some companies require wood hook users to wear protective shin guards. One southern paper mill reports that the use of shin guards has reduced wood hook injuries by 85 per cent during a period of two years.

33. Some mills are trying a shin guard made of fine-link steel mesh covered with leather. A pair weighs between two and three pounds and can be worn either over or under the trousers.** A legging made of fiber, lined on the inside with felt, is commercially available.*** (See Figure 7.)

34. Workers object to shin

* See Safetygraph No. 14, "Only A Scratch," National Safety Council.

** Transactions, 28th National Safety Congress, pages 524-525.

*** Manufacturer's name will be supplied upon request.

guards principally on the grounds that they are too heavy, and in warm weather too hot. To overcome the latter objection, manufacturers have developed a shin guard with soft rubber pads which keep the guard away from the leg and permit circulation of air. However, this type has to be worn under the trouser leg; when worn over the trouser leg, circulation of air is stopped.

35. Since about 10 per cent of the injuries involving pulp hooks occur to the thigh, aprons are sometimes used. Some companies make aprons from thick felt.

36. One Eastern logger recommends the use of felt or leather guards for the forearm.

Peavies and Cant Hooks

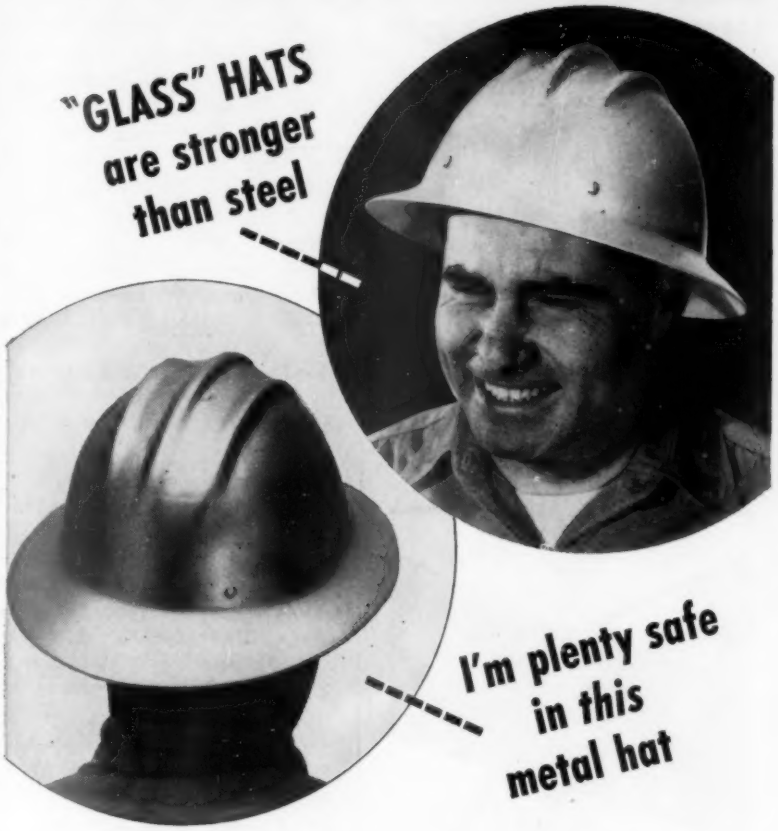
37. A few uses of peavies and cant hooks are to help break up frozen log piles, to roll logs on the ground, to help load and unload trucks, to pry and lift the ends of smaller logs, to push trees being felled.

38. Generally, a duck or chisel hook is preferred for handling frozen logs because the point penetrates more deeply than do other types of points. Round or octagon hooks are preferred in summer since they do not stick so much. Figure 8 shows how to test the hang and slope of a peavey with a duck or chisel hook. With the pick and hook point resting on a wood floor, a push on the handle of a correctly designed peavey will shave a curl of wood from the floor.

39. The study cited in paragraph 6 reports that in 11 of the cant-hook cases slipping of the hook led to the injury. In two cases the bark gave way. In two other instances the handle broke. Dullness of the hook appeared to be a factor in these 11 cases.

40. When a badly worn hook bolt breaks in use, the worker can receive a sudden and severe fall. Therefore, the hook bolt should be inspected occasionally to determine whether it is so worn as to require replacement.

41. More often, injuries from the use of peavies result when the handle breaks or the hook comes loose. The remedy for the latter



Glass or Metal...

HARD BOILED* HAT

protection can't be beat

Now you can get the famous Bullard shock-absorbing safety hat design in either molded Fiberglas or special alloy aluminum. Unique ribbed crown is the safest ever built. Greatest protection; light weight; easiest to wear on any job.

"Glass" *Hard Boiled* Hats are available in solid molded colors and white—even a glow-in-the-dark model; passes all tests for electrical shock resistance; impact resistance; is water- and flame-resistant.

Aluminum *Hard Boiled* Hats are handsomely finished in satin-like natural metal. *Passes standard drop* tests; safe to wear where electrical shock is no hazard.

Keep your men better dressed; safer, *cooler* and more comfortable with Hard Boiled Hats.

Simplify stock problems; one size fits all heads; instantly adjustable. Six-second hammock - sweatband change. Chin straps, lamp brackets and winter liner available.

Write for circular and prices

HARD BOILED

*Trade Mark Registered

EVERYTHING BULLARD IN SAFETY

E. D. BULLARD COMPANY

275 Eighth St., San Francisco 3, Calif.

DISTRIBUTORS IN PRINCIPAL CITIES

FIRST IN HEAD PROTECTION

"IT'S A SNAP"
with BUHRKE'S new
SCOTCH
SNAP

A revolutionary multiple purpose snap for hoisting material to the pole top. Makes possible an endless hand line, eliminating the tieing of knots. Designed so it can not catch on service wires while raising or lowering. Tested to 2500 lbs. between eyes and 1000 lbs. on each hook and upper eye. Write for details!

R. H. Buhrke Co.
4701 W. Grand Ave.
Chicago 39, Ill.

cause is care in making certain that the hook is firmly set in the log, even if it must be driven in.

42. Occasionally peavey handles are broken because men double up on one peavey. The peavey is a one-man tool. When the job seems to require two men, two peavies should be used.*

43. The peavey should never be set so that the worker must place both feet on the log with his body at a backward angle. The feet should always be in such a position that the man will not be thrown off balance if the hook pulls loose or the handle breaks.

44. As in the case of other wood handling tools, the hook point must be kept sharp. Peavies should be kept out of the way when not being used; tripping over a peavey can result in serious injury. Often the best way to set aside a peavey is to stick the point in the ground or in a log so that the tool remains upright.

45. Before beginning work with a peavey, the user should make make certain that the area in back is clear of tripping hazards.

46. In rolling a log the woodsman should stand behind the log.[7] Although some highly experienced men are able to pull from the front without injury, the practice is not recommended for there is danger that the log may roll on a foot or crush a leg. (See Figure 9.) The woodsman should also watch constantly to see that a log rolled from behind does not run up on a hump and then, while he is changing his grip, roll back on his foot.

Pike Poles

47. Pike poles are commonly used for handling floating logs and for sorting pulpwood on flat chain conveyors. One company uses pike poles about 9 feet long to help unload and stack wood. The pole is used to swing the crane load into position while the worker remains at a safe distance.

48. A screw type point is favored by some on the grounds that it does not pull out unless released by the user with a twisting motion. (See Figure 10.) A point having a straight side (non-screw type) must be released by a jerk which occasionally results in loss of balance. However, others believe that a point with square cross-section can be released easily with a twist. In any case, the steel point should be kept sharp.

49. The handle, if of wood, should be sound, smoothly finished and free from splinters. The problem of splintering is eliminated if aluminum handles are used. Another advantage is their lighter weight which makes handling easier and lessens fatigue. Several comapnies report use of a light alloy handle plugged at both ends so that the pole floats if dropped in water.

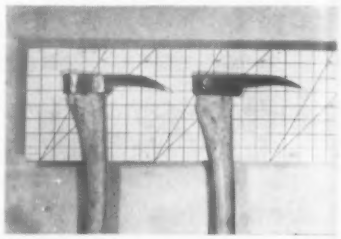


Figure 11. Note sharper curve on point of left picaroon, said to hold more securely than the other. (R. W. Laughlin).

Picaroons

50. Short-handled picaroons, 9 inches to 16 inches long, are frequently used in place of wood hooks. A picaroon with a handle from 27 inches to 4 feet long is used to roll or pull wood at flood or walkaway levels. Figure 11 shows two picaroons with 27-inch handles. The one on the left has been found to hold firmly, whereas the other, whose point has a less pronounced curve, has been found to slip out.[5] The angle of the under surface of the point to the line of the handle is 70° when the point is 4½ inches long.

51. A picaroon with a 27-inch handle is about maximum length for ready use with one hand. When a longer handle is used, two-hand manipulation is required.

52. Picaroon heads should be long enough to hold securely. Short heads sometimes work loose and fly off.

* *Safer Oregon*, quoted in *Wood Products Safety*, July, 1947, National Safety Council.

REFERENCES

1. *Injuries and Accident Causes in the Pulpwood-Logging Industry, 1943,*

SKIDPROOF
SAFETY FLOOR FINISH
Keeps Floors Safe And New-Looking

EVERYTHING FOR INDUSTRIAL HEALTH AND SAFETY

You can depend upon Con-Sol Products for every maintenance problem — cleaning, insect or bacteria control, floor upkeep, health and safety.

Write Con-Sol technicians without obligation, about any specific health hazard or unusual condition in your plant. Many years of experience and over a hundred industrial housekeeping products are available to solve your every maintenance need.

Helpful Maintenance Chart On Request

Skidproof gives any type of floor — wood, linoleum, rubber, asphalt, tile or terrazzo — a hard, durable slip-proof surface that protects against the toughest kind of wear. It's easy to apply, easy to clean. It's quick-drying, odorless, economical — one gallon covers 2000 square feet!

Skidproof overcomes the slipping hazards of ordinary wax — makes rubber burns, stains and surface damage easy to get off — won't crack or check — won't discolor any floor surface. It's the finest surface finish available to keep floors shining, beautiful and safe!

Tested and approved by Underwriters Laboratories

CON-SOL Products
CONSOLIDATED LABORATORIES, DIV.
CONSOLIDATED CHEMICAL LABORATORIES, INC.
1470 S. VANDEVENTER ... ST. LOUIS 10, MO.

One COUNCIL MEMBER BOUGHT 120,000 COPIES OF THIS BOOKLET!

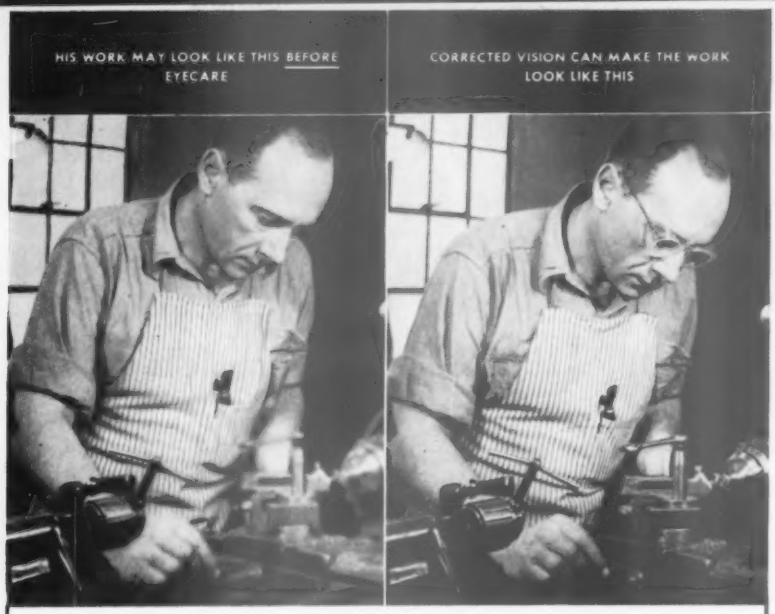
IN THE PINK is by all odds the most popular health rule booklet the Council has yet produced. One large Council member liked it so well they asked for 120,000 copies . . . and the Council had to go back to press to fill the order!

When a single Council member orders that many copies of *one* booklet, you know it must be good. And it is!

- It's illustrated by cartoonist, Walt Ditzen—which means it's sure to be read.
- It's written in a light-touch vein that makes it interesting and easy to understand.
- It covers the most important fundamentals of good health: sleep, diet, posture, cleanliness, exercise, eye and foot care, etc.

If you haven't seen this clever little health rule booklet, write for a sample copy today. See for yourself how it can help your employees keep IN THE PINK.

THE NATIONAL SAFETY COUNCIL,
425 North Michigan Ave., Chicago 11, Illinois



Visual Care
Cuts Accident Costs

Under 20, only 23% of shop employees have defective vision — in the 40 to 50 year group, 71% are affected. AO case histories show (1) accidents and their costs reduced as much as 74% with an adequate EYE CORRECTION-PROTECTION PROGRAM (2) production increases of 1% to 37% and spoilage savings of 11% or better are possible. The complete story is contained in AO's free booklet "IMPROVED INDUSTRIAL VISION." Write Dept. CP-N8.

American Optical Company
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

SAFETY
FIRST
YOU CAN USE THIS CHANGEABLE DISPLAY FOR SAFETY FUN HAZARDS CLEANLINESS PLANT ACTIVITIES AND MANY OTHER MESSAGES

The DAV-SON SAFETY DIRECTOR

Flashing color, changeable letter display for your important safety messages. The most effective safety bulletin made.

Write for special circular.

We manufacture Changeable Letter Bulletin Boards, Cork Back Boards and Directories for every purpose.

DAV-SON

A.C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

1944, Bulletin No. 924, U. S. Department of Labor, Bureau of Labor Statistics, published 1948.

2. *Annual Report*, Ontario Pulp and Paper Makers' Safety Association, 1948.

3. *Wood Hooks and Their Use*, G. F. Williams, Liberty Mutual Insurance Company, 1948.

4. *Analysis of Woods Accidents in the Upper Peninsula of Michigan*, Table 1, Leland Hooker, Michigan College of Mining and Technology, 1949.

5. *Sixteenth Annual Report, 1947*, The Quebec Pulp & Paper Safety Association, Inc.

6. *Pulpwood and Log-Handling Hand Tools*, Robert W. Laughlin, Liberty Mutual Insurance Company, 1948.

7. *Northeastern Loggers' Handbook*, Preliminary Review Edition, 1946, by Fred C. Simmons, Northeastern Forest Experiment Station, Forest Service, U. S. Department of Agriculture.

8. *Wood Hooks*, February 3, 1950, Thomas McKie, West Virginia Pulp & Paper Company, Covington, West Virginia.

ACKNOWLEDGMENT

The material for this data sheet has been drawn principally from the works of Robert Laughlin and G. F. Williams noted above. Additional information was supplied by members of the Pulpwood Logging Division of the Pulp and Paper Section, National Safety Council, and by others too numerous to mention. E. P. Marconi, staff representative, Pulp and Paper Section, directed the preparation of this data sheet. It has been reviewed by the Safe Practices Conference Committee and approved by the Industrial Conference of the Council.

Yes, I'm a Safety Nut

(From page 19)

District safety meetings are meetings of safety committees in certain areas. On the Chicago Terminal Division we have four such committees—one for each major yard and one for the passenger area. In St. Louis we have one committee in our passenger yard and one committee in our freight yard at East St. Louis. The expanded membership of these committees consists of all minor supervision in that territory, to which has been added a number of men from the rank and file, such as conductors, trainmen, mechanics, and trackmen.

In addition, visitors are encouraged to attend these meetings, and the local committeemen representing the employees are either members of the committee or are

invited to attend as visitors. We insist that complete minutes of the meetings be prepared—practically verbatim—to show just what problems were discussed and what action was taken.

You would be surprised to see how interest in these meetings has grown and how each district looks forward to receiving the minutes from other committees for possible new ideas. I read the minutes of every meeting and comment on any unusual activities which may be listed.

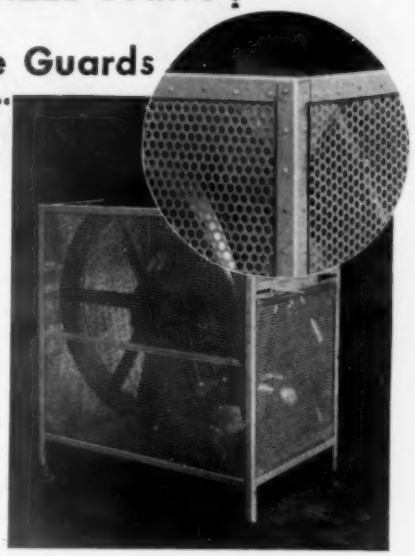
Group meetings with motion pictures, entertainment and other features have been expanded far beyond the original intent. They have paid some of the best dividends. We realized that it might be difficult to interest men in attending meetings on their own time, particularly in the evening. But we felt that if this could be accomplished, it would not only improve safety but also employee morale.

Consequently, a standard form of safety meeting was developed. This consists of 15 to 25 minutes devoted to talks and discussions of safety by the superintendent, a staff officer, or an official of the brotherhood. Following these talks, a safety movie and one on hunting or fishing, or a film secured from the state conservation department, or through a film catalog, is shown.

Entertainment is then provided by the employees, following which refreshments are served by the management. The menu may consist of baked beans or frankfurters and potato salad, coffee and milk, or on some occasions it may be more elaborate. The success of these meetings has been far beyond our expectations.

The safety picnic on the St. Louis Division at Terre Haute in August 1949 was attended by 2,800 persons, of whom some 900 were employees. It was the largest picnic ever held in the public park and the employees donated a flag pole to the park officials. The talks were brought to the audience over a public address system. At Columbus, Ohio, the safety picnic drew an attendance of 4,500, and safety addresses were made by the general chairmen of engineers, the superintendent, the wife of an em-

GUARD FOR SAFETY with
H & K STANDARDIZED PARTS
for
Belt and Machine Guards



- Easy to Assemble
- Strong Rigid Construction
- Adequate Ventilation—High Visibility
- A Fine Investment

Properly built guards for belts and moving parts of machines are not an expense—they are an investment in safety. H & K furnishes perforated angles, bands and reenforcing gussets from which your maintenance man can assemble a frame to exactly fit your needs. Then the frame is covered with perforated steel sheets and the finished guard can be mounted on our detachable floor posts and sockets.

Write for complete information.

Recommended by safety inspectors and approved by the Underwriters Laboratory.

The Harrington & King Perforating Co.

5645 FILLMORE STREET, CHICAGO 44, ILL. 114 LIBERTY STREET, NEW YORK 6, N. Y.

For Safety Guardi-Ann Hat

U.S. PATENT NO. 135998

Combines utmost protection and style. Exclusive patented features found in no other hat.

Write for Free Sample or Order Direct from us

$13.50 dz.

CHIC MAID HAT MFG. CO., Inc.
630 HIGH STREET
BUFFALO 11, N. Y.

WHEN THE HEAT GETS YOU
HAV-ALIFT

It's common fact that excessive sweating, slows down the body's normal processes. To alleviate this condition and restore production to normal, place a HAV-ALIFT Dispenser near the water cooler. HAV-ALIFT Regulated Salt Tablets will prevent nausea and digestive disorder which might occur by taking plain salt tablets.

HAV-ALIFT comes in 750 and 1,500 Dispensers with either plain Salt or Salt and Dextrose tablets.

For further information, write

A. E. HALPERIN CO., INC.
75 NORTHAMPTON STREET
BOSTON 18, MASS.

Modernize your present belts with SAFE-HI Shock Absorbers!

Get the **added safety** of Unolyn Shock Absorbers without discarding your present supply of construction workers' belts.

Built of doubled Unolyn webbing and fitted with D-ring and link for attaching to your present belt.

The Unolyn Shock Absorber PUTS ON THE BRAKES and stops a falling man gradually because of its amazing ability to stretch under loading—and stay stretched.

ASK TODAY FOR COMPLETE INFORMATION ...FROM YOUR SAFETY APPLIANCE DEALER OR THE MANUFACTURER

Safe-Hi Products

- SAFETY BELTS
- LADDER SHOES
- POLE GRIPS
- WALL GRIPS
- LIFE LINES AND LANYARDS
- CHISEL GRIPS

ROSE MANUFACTURING CO.
1731 ARAPAHOE STREET DENVER 2, COLORADO

MAINTENANCE MEN AND SAFETY ENGINEERS
agree on the many merits of
JOHNSON'S RUBBER LADDER SHOES FOR SAFETY

Top shoes prevent side slipping

Extension ladder shoes

Step ladder shoes are noiseless

For crutches and canes

Order from your dealer or
JOHNSON LADDER SHOE CO., EAU CLAIRE., WIS.
SAVING LIFE IS OUR LIFE

ployee, and the general manager.

An evening meeting in Columbus was attended by 450 employees, of whom 350 were train and engine service men. A similar meeting at Toledo, attended by 300 employees and their wives, brought a very appreciative letter from the wife of a freight conductor. She was impressed not only with the objectives of the safety program but also with the cordial relationship between officers and men.

Safety posters are being used increasingly. Employees are interested in preparing posters and suggesting slogans. We are operating on the basis that constant repetition will burn the safety idea into a man's mind.

To show the men that management is really interested, we started a series of "General Managers' Safety Days" on the various divisions. The first of these was held October 6, 1948. Between 8:00 a.m. and 9:00 p.m. I talked to 11 groups of employees, totaling 3,500.

We set a standard that day that was followed throughout the region. All of the men from one vicinity were assembled and entertained by music over a loud speaker until the general manager arrived. He was accompanied by at least two members of his staff from Chicago, the general superintendent and one member of his staff, and the superintendent of the division and his entire staff.

The general manager was introduced by an employee—at Columbus it was the vice-president of the Brotherhood of Railroad Trainmen — following which he spoke for about 15 minutes. At the conclusion of the talk he announced that he would like to meet as many of the men as possible, and usually 30 to 40 per cent of them came up to shake hands. After a visit of 20 to 30 minutes with employees who remained, the caravan moved on to the next location for a repeat program.

During the six months following October 6, I covered all nine of the superintendent's divisions on the western region with a General Manager's Safety Day. Sixty meetings were held with 12,500 employees, and I estimate that I shook hands with 4,200 of them. Records were made of the talks at

many of the meetings and played back to the men at district meetings and at evening safety rallies.

It is impossible to estimate the impetus given to safety through these activities. They not only created an interest which is paying dividends in reduced personal injuries, but also a great boost in the morale. Furthermore, they served notice to the superintendent and his staff that the only manner in which they could carry on a successful program was to get down on the ground, mingle with the men and talk to them about mutual problems.

I repeat what I said before—I'm a safety nut. My superintendents and their staffs are getting that way too. We are all working at this job together — spending time, thought and money. We are finding that safety is like many other things in life; you get out of it just what you put into it.

Never Too Old

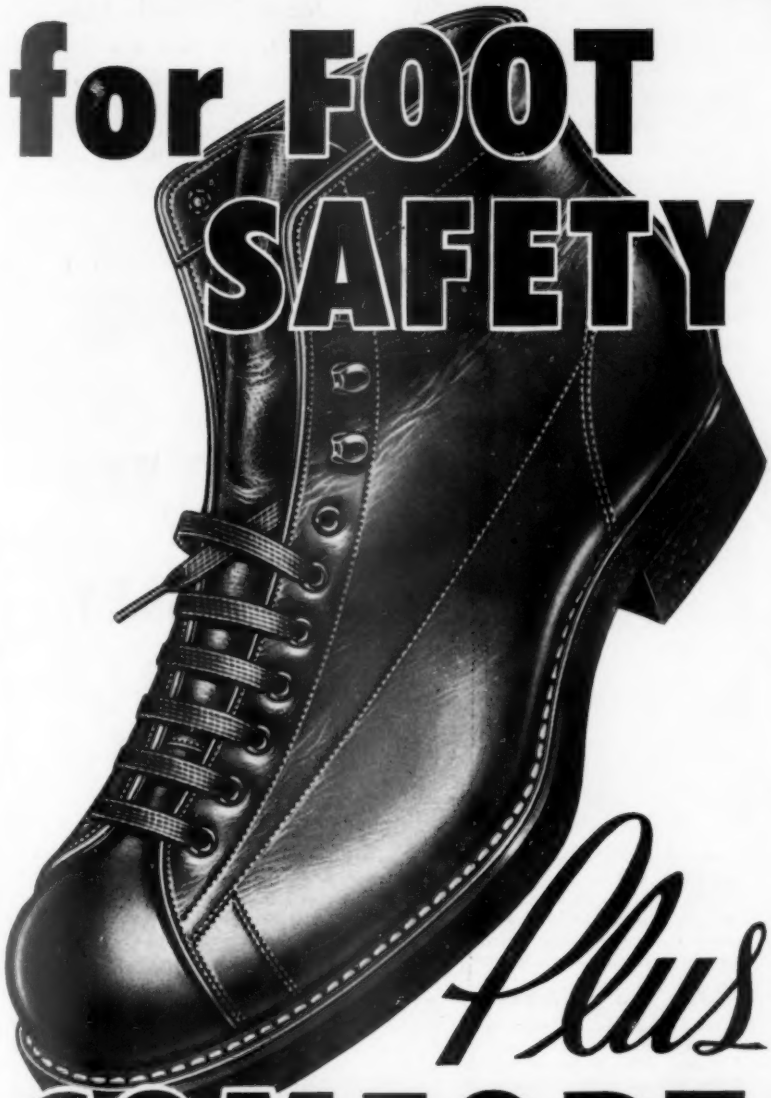
(From page 40)

The secret of its success has been the intensive interest of key men of Milwaukee, representing the outstanding business firms of the community, with Myron E. Jolidon, supervisor of personnel & safety for the Standard Oil Company, as general chairman of the School, and T. N. Moore, president, Fellenz Coal & Dock Company, as chairman of the Safety Division.

According to Manager Muth, Milwaukee business realizes that no activity of the community is more important than accident prevention. "Protection of our industrial man power has been an important factor in the peaceful labor relations which we have enjoyed," he stated recently.

"Through intensive safety education, industrial injuries and fatalities in the Milwaukee area have been reduced during the past two decades to a level 58 per cent below the national average, with an accrued saving of approximately $10,000,000.00 annually in reduced Workmen's Compensation and production losses. The Foremen's Safety School has played an

for FOOT SAFETY



Plus COMFORT

This PLIABLE "Safety First" lace-to-toe shoe gives invigorating comfort from the start!

Comfort invites full time wear . . . assures foot protection when accidents happen! Why not eliminate toe casualties by offering comfortable safety shoes that employees enjoy wearing from the start!

This flexible lace-to-toe safety shoe is UNION MADE with Goodyear Welt, oil and heat resisting Neo-Cord sole. For other quality details, low price and FREE SAFETY POSTERS, write today to . . .

Safety First SHOE COMPANY

HOLLISTON 3, MASSACHUSETTS

West Coast Branch: Pacific Bldg., 16th St., Oakland, Calif.

Pioneer Manufacturers of Safety Shoes

important part in bringing this about.

"We feel that the Milwaukee Foreman's Safety School has been largely instrumental in the saving of just about one life per week in our Milwaukee work shops. It's a big job to run a school that has an enrollment of 10,000, but results certainly justify the effort—and prove once again that safety pays big dividends in more ways than one."

MSA Research Lab

(From page 42)

and industrial health and hygiene. An experimental shop on the ground floor manufactures new models of instruments and equipment developed through research.

Director of Mine Safety Appliances Company's Research and Development is Dr. William P. Yant. A member of many technical societies and associations, he was the first president of the American Industrial Hygiene Foundation. In 1946, he received the Pittsburgh Award of the American Chemical Society for distinguished service to chemistry. Recently, he was appointed chairman of the steering comittee of the U. S. Technical Conference on Air Pollution. Currently he is first vice-president of the American Society of Safety Engineers.

Following the dedication exercises, guests were taken on a tour of the new laboratory to witness demonstrations and exhibits of research and testing procedures.

The company displayed its entire line of safety equipment, hundreds of products ranging from tiny first aid kits to a complete mobile laboratory for air pollution surveys. The display was described as being the most comprehensive collection of safety equipment ever assembled at one time.

In the electrical laboratory, an exhibit showed the history of mine lighting and the progress made in the miner's Edison electric cap lamp since it was invented in 1915 by Thomas A. Edison. The present

PROTECT EMPLOYEES *against* UNNECESSARY HEAD INJURY

Here, at last, is a light weight, plastic safety helmet, resistant to 3,000 volts of electricity, and by actual test, able to sustain 80 foot pounds under ball impact. What's more, the Paramount safety helmet is light as a feather—comfortable, waterproof, adjustable to head sizes (6½ to 8), and with enough clearance space between head and helmet crown to cushion and absorb intense impact. Genuine leather suspension band has long life and stands up under years of use.

For Use in Mines

A miner's lamp bracket, adaptable to every type of lamp, can be furnished either on helmet or cap. Being entirely a non-conductor of electricity, this is the safest miner's helmet available.

Winter Lining

For increased warmth, a two piece lining with a flannelette facing is provided. The lining is sanforized, warm, and is made in a full range of head sizes.

As the producers of millions of M1 Army helmet liners, the famous Cairns-Paramount Firemen's helmet, the Army, Navy and Civilian Air Corps crash helmet for jet pilots and other air corps personnel, the Army Quartermaster Tank Corps helmet, we are specialists in this field and offer you greater protection with lighter weight.

The Paramount helmet and cap are produced under one or more of these patents—No. 2-420-522, No. 2-423-076, and other patents are pending.

ORDER THRU YOUR DEALER OR, WRITE DIRECT TO

PARAMOUNT RUBBER COMPANY

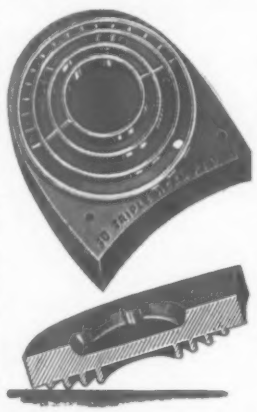
Synthetic Rubber & Plastic Engineers & Mfgrs.

10401 Northlawn Avenue Detroit 4, Michigan

HOgarth 3050

NON-SKID SAFETY

SHOCK ABSORBING



LONGER WEAR

The Triple Safety Heel was designed to minimize foot slipping accidents. It has a tread design of circular ribs with connecting cross bars that causes suction. In walking it gives road contact of one inch, where ordinary heels contact only on the edge. Laboratory tests show Triple Safety Heel has 97% road contact and traction.

Design permits rubber to flex, absorbing body shocks, minimizing fatigue. Triple Safety Heels will give longer wear and reduce slipping accidents on wet or slippery floors.

WRITE FOR CIRCULAR

TRIPLE SAFETY HEEL CO.

2149 Leland Avenue Chicago 25, Ill.

miner's cap lamp, distributed throughout the world by MSA, has

At the dedication of the new laboratory a comprehensive collection of devices for protecting life and property was displayed. Here Dr. William P. Yant, the company's director of research and development, points out features of sound-powered telephone system to Dr. James Boyd, director of U. S. Bureau of Mines (center) and Ned H. Dearborn, president, National Safety Council.

100 times the illuminating intensity of Edison's first model.

A display in the rubber and plastic laboratory covered the development of protective hats and caps made of laminated plastic. Hats were subjected to a test demonstration in which sharp, pointed missiles dropped on them.

In the dust laboratory various kinds of dusts were drawn from a sealed chamber through respirators to demonstrate their effectiveness in preventing inhalation of harmful airborne solids by workmen. Dust respirators perfected by the company remove particles as tiny as 1/50,000th of an inch. The company developed the first dust respirator approved by the U. S. Bureau of Mines.

Other exhibits in the dust laboratory included equipment for sampling and identifying dust particles, and instruments used in air pollution surveys.

The display in the physiology laboratory consisted of instruments that administer oxygen for inhalational therapy. These are used in treating silicosis and other respiratory ailments, as well as for emergency treatment of drowning and suffocation victims.

Another laboratory demonstrated preparation of chemicals used in gas masks and respirators

Coming Off the Press this month

OUR NEW 32 PAGE INDUSTRIAL SAFETY CATALOG

Full of new safety emblems, plaques, trophies and awards for Safety, Service and Athletics.

Be sure to get your copy

Write
CLARENCE WILLIAMS
Williams Jewelry & Mfg. Co.
Silversmiths Bldg., 10 S. Wabash Ave.
Phone CEntral 6-5018
Chicago 3, Ill.

Tuffy
TRADE MARK ®
SLINGS
Entirely Unlike Any Other

Scores of wires, stranded into 9 parts, then machine woven into an interlaced wire fabric—that is the unique patented construction which gives Tuffy extraordinary flexibility and stamina.

Super TOUGH— On every kind of load, under all kinds of pulls and with every type of hitch, Tuffy Slings have proved their superiority and universal adaptability.

Super-FLEXIBLE— Tie Tuffy Slings into knots, kink them, flatten the eyes. Observe how many more times you can straighten Tuffy Slings out without material damage. Note too, that cutting any one of the 9 parts will not result in stranding the sling.

Tested Strength Twice Safe Working Load Limit

Each Tuffy sling is proof-tested to twice the safe working load indicated on its metal tag. Tuffy's interlaced construction makes possible eye splices averaging 95% of fabric strength.

9 Types-Factory Fitted or Unspliced on the Reel

Try any one of the 9 factory packaged types—for choker, basket or bridle hitches. Prove to your own satisfaction their money saving worth to you. Or, if you're rigged for splicing—Tuffy interlaced wire sling fabric is available on the reel.

union Wire Rope corporation

2224 Manchester Ave., K. C., Mo. Send Tuffy Sling details.

FIRM NAME_____
ADDRESS_____
CITY_____ STATE_____

Big Step Forward in

SHOWER ROOM SAFETY

ATHLETE'S FOOT PREVENTION

Old way...

In the past, blame for Athlete's Foot was placed solely upon Athlete's Foot fungi.

SO...

Preventive methods consisted of attempts to kill the fungi or to prevent exposure to them.

BUT...

Skin specialists discovered that fungi are everywhere. You cannot kill them all, nor can you avoid exposure to them.

The real cause of Athlete's Foot, they found, is a weakened skin that allows the fungi to grow. Attempts to disinfect the feet may weaken the skin still further.*

New way...

Today, blame for Athlete's Foot is placed squarely upon a weakened skin.*

SO...

The new method is to toughen the skin and increase its resistance to fungus attack.

THAT IS WHAT ŌNOX DOES

Instead of disinfecting the feet, Onox mineral salts toughen the skin and make it resistant to fungus attack.

Onox is used in a sponge rubber foot mat. There is no splash, no mess, no waste. Nothing to get out of order. And the men like to use the mats.

Today, over 70% of the largest industrial companies in the country use ŌNOX

*Archives of Dermatology and Syphilology, April, 1942.

FOR FULL DETAILS AND OUR 60-DAY TRIAL OFFER, WRITE

ŌNOX, INC., DEPT. N., 121 SECOND ST., SAN FRANCISCO 5, CALIF.

WAREHOUSES: BROOKLYN, CLEVELAND, NEW ORLEANS, LOS ANGELES

Write Today for Your Copy

Bashlin's new bulletin giving full details on Linemen's Safety Equipment is ready for you . . . a complete line from which to chose; and every one a champion. Write today!

W. M. BASHLIN CO. Grove City 3, Pa.

for poisonous or noxious fumes. A breathing apparatus that generates its own oxygen supply, enabling its use in any type of unbreathable atmosphere, also was shown.

Various instruments for detecting poisonous or flammable gases were exhibited. One instrument, a carbon monoxide recorder, can detect as little as four parts of that deadly gas in a million parts of air. This instrument is used for ventilation control systems for vehicular tunnels.

Accident Costs

(From page 23)

is able to handle the same amount of work in the year, even though delayed, no loss of profit is chargeable to the accident.

In the exceptional cases where loss of profit is demonstrable, the cost charged should be the loss in gross sales receipts minus the marginal cost of production that would have occured had the goods been produced. A rough but simple way to estimate this would be to multiply the accounting department's estimate of profit per unit by the management's estimate of the number of units by which sales were reduced as a result of the accident.

4. *Overhead cost while the injured employee is a nonproducer*, insofar as it is a valid charge, is taken care of by other elements of cost listed above. Investigation indicates that few managements make provision in their plant layout and equipment for extra equipment or space for use in accident-produced emergencies.

(Detailed instructions on computing these costs and the forms used in gathering the data will be presented in Part II of this article, which will appear in the September NATIONAL SAFETY NEWS*)*

Eye Safety

(From page 27)

Included on the card is a record of the employee's prescription, if spectacles are worn on the job. Further information concerning the employee's visual job performance is recorded on the reverse of the card, as determined

by a test of his visual skills made with an instrument provided by an optical company.

Reports are prepared with the aid of an I.B.M. machine used by the record section of the dispensary. Information for the I.B.M. "mark sense" card is obtained from the medical services card, one being completed by the ophthalmic dispenser for each employee he sees. The section has a series of codes designating each visit, and describes the service performed for that person. Reports are secured each week from the statistical section, with an additional comprehensive report on the month's activities.

Upon termination of employment, all records of the employee held by the Occupational Vision Section are combined with his clinical record and kept for possible future reference.

The compact new office housing the Occupational Vision Section was designed by the medical director, the ophthalmic dispenser, and an optometrist consultant.

The office, which consists of two rooms, was placed in an area of the dispensary readily accessible but away from distracting noises. One room was made into a waiting room which contains a concealed storage space. A bench with a hinged top provides storage for a considerable quantity of material. The inner office contains a built-in desk and work table with an adjoining fitting table. Centrally located drawers contain the necessary instruments and equipment. Pigeon-holed shelves provide visible storage space for materials used frequently. At the side of the fitting table is a viewing mirror so the patient can check the spectacles for appearance.

The main office is arranged so that any of the office facilities may be utilized without the dispenser leaving his seat at the fitting table.

Eye injuries at Oak Ridge National Laboratory have been few but most of those which did occur

IPCO PUNCH PRESS FEEDER

A speed-up tool for lifting, feeding and positioning blanks of metal and other materials in stamping machines and die presses without inserting the hands or fingers within the danger zone.

Used for separating sheets, transferring from piles or stacks . . . many other uses on all non-porous materials.

Write for Bulletin K-80A

IPCO
Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2850 N. FOURTH STREET · PHILADELPHIA 33, PA.

5000 LB. LOADS GET SAFE TRACTION
UP AND DOWN THIS RAMP OF A LARGE CHEMICAL COMPANY
ON A SURE-GRIP ferrox SURFACE

PROBLEM—An outdoor ramp, subjected to weather, dirt, grease and hard use from heavily loaded trucks and busy feet.

SOLUTION—More than 3 years ago, **FERROX** abrasive compound was troweled onto ramp surface, at very low cost. Still giving *good* traction and *sure* footing today, under constant use.

FERROX is easy to apply . . . Simply trowel on danger spots . . . One gallon covers 40 square feet . . . Dries over night . . . Firmly embedded abrasive particles provide good traction and sure footing under wet, dry or oily conditions.

Send today for folder describing uses on many danger spots und illustrating how easy Ferrox is to apply, or phone Bob Eastty, ESsex 3-7060.

*Reg. U.S. Pat Off.

NSN-8-50

AMERICAN ABRASIVE METALS CO.
466 COIT ST., IRVINGTON, N. J.

☐ Please send me your illustrated FERROX folder.
☐ At no obligation, please have one of your Sales Engineers call.

Name _____ Title _____
Company _____
Address _____
City _____ State _____

FOOTHOLD* SAFETY TREAD

The low-cost answer to . . .

SAFE FOOTING

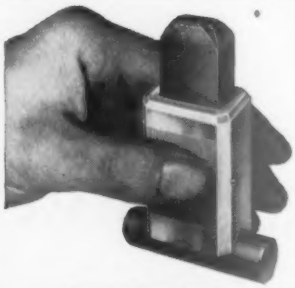
Eliminate all those dangerous, slippery floor areas on ramps, aisles, stairways and all over the plant. You can do it economically with quickly installed, long-wearing abrasive cloth FOOTHOLD Safety Tread cleats or rolls. The "sandpaper-rough" surface provides the sure-footing that makes the job go faster as well as safer.

Survey all those slippery areas and make them safe now with FOOTHOLD Safety Tread. Write for information.

**Trade Mark*

BEHR-MANNING · TROY, N.Y.

Use NORTON® abrasives sharpening stones



Order Yours Today!

The New

"SET-RITE" STEEL STAMP HOLDER

For Safe, Clear-Cut Marking

of Round, Square, Flat and Other Shaped Products

You'll want to standardize on "Set-Rite" Holders once you try this *safe* way of using steel stamps. They provide maximum safety — accurate marking. Made in a wide range of sizes to suit your needs. *Write for quotation today.*

Write for Data Sheets SR-1

M.E. CUNNINGHAM CO.
SAFETY STEEL STAMPS

200 East Carson Street · Pittsburgh 19, Pa.

could have been avoided. Some were definitely the employee's responsibility; some were due to faulty supervision.

The writer has seen the attitude of employees toward the program shift from antagonism to friendly interest. Such a change is not brought about easily. It takes time patience, and, above all, a deep interest in the individual and his problems.

Recently a machinist came in complaining of blurred vision when wearing his prescription safety glasses. After checking the lenses for optical correctness and the frames for fitting, the cause of the trouble was discovered. A drop of oil has splashed on the lenses and attempting to clean them by wiping had spread a film over the surface. After a good scrubbing with soap and water the spectacles were readjusted to his face.

"Best they've felt in weeks," he said as he left, and he became another satisfied customer. A small service, it is true, but if anyone had told him the trouble was merely a greasy lens he would have paid no attention and gone on being uncomfortable and dissatisfied.

The professional atmosphere of the dispensary of the Health Division is only one of the factors contributing to the favorable attitude of employees toward the vision program. The ophthalmic dispenser is able to work in close cooperation with the physicians dealing with problems of vision. Headaches, dizziness, nausea, and other symptoms might be due to lack of proper visual skills needed for the job. If the examining physician suspects that this is the cause of the trouble, he refers the patient to the Occupational Vision Section.

After a friendly chat in which the ophthalmic dispenser discusses the problem, he checks the spectacles for alignment, fitting and comfort. If none of these seem to be at fault, the patient is given a test of visual skills and the results recorded. This is not a diagnostic examination but merely a test of the employee's performance of 12 visual skills. This will show whether or not a complete eye examination is advisable. If so,

the employee is advised to consult his ophthalmologist or optometrist.

Through the cooperation of the physician with the ophthalmic dispenser, many minor causes of visual complaints are discovered and corrected promptly. Major complaints are corrected by refering the patient to the specialist of his choice. The referral form is completed in such instances and forwarded to the specialist.

Even before the Health Division took over the eye safety program it was successful. It is believed however, that the program has increased in scope and secured even greater results under the present administration.

Announce Leaders in Mine Safety

CLIMAXING the twenty-fifth anniversary of the National Safety Competition, the country's mineral industries attained in 1949 the best safety record in the history of the contest, the U. S. Bureau of Mines has announced.

In naming the silver anniversary winners of the Sentinels of Safety trophies to the plants that achieved top honors in safety, the Bureau of Mines reported that 202 mines and quarries had injury-free records last year.

The 1949 winners achieving top safety honors in their respective groups will be awarded bronze Sentinels of Safety trophies and the Sentinel of Safety flags by *The Explosives Engineer* magazine. An individual Certificate of Achievement of Safety will be presented by the Bureau of Mines to each man in the winning plants.

The 1949 winners of the Sentinels of Safety trophies are:

Anthracite Mines: Stevens Shaft Mine, Kehoe-Berge Coal Company, Exeter, Pa.

Bituminous-Coal Mines: Reliance No. 7 Mine, The Union Pacific Coal Company, Reliance, Wyo.

Metal Mines: No. 2 Mine, American Zinc Company of Tennessee, Mascot, Tenn.

Non-metallic Mines: Bellefonte Mine, National Gypsum Company, Bellefonte, Pa.

Open-Pit Mines: Embarrass Mine, Pickands Mather & Company, Biwabik, Minn.

Quarries: Dolonah Quarry, Ten-

LIFE STORY of a JOMAC WORK GLOVE

1. First day on the job . . . and doing fine. Jomac cushions the hand—doesn't snag or tear.

2. Some time later . . . and a trifle worn. Presto! Shifts from right to left and starts a new life.

3. Hears the boss say, "Production's up since we got those Jomac Gloves."

IT'S TRUE—Jomac Work Gloves revolutionize handling problems. They're reversible, flexible, long-wearing. They're easy to wash or dry clean. They protect against heat or cold. Write for complete details.

JOMAC WORK GLOVES
C. WALKER JONES CO.
6137 N. Lambert St. Philadelphia 38, Pa.

SPECIALIZING IN "BETTER-BUILT"
HEAD & EYE PROTECTION
FOR OVER 25 YEARS

There is a DOCKSON distributor near you. Name on request. Write for our complete safety equipment catalog.

Dockson CORPORATION
3839 WABASH • DETROIT 8, MICH.

ployee morale, and production which cannot be afforded. It is not

For Safety's Sake Use

DAYTON SAFETY LADDERS

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

Write today for Bulletin No. D-8

Sizes 3 feet to 16 feet in height with standard rubber safety shoes at no extra cost.

DAYTON SAFETY LADDER CO.

2339 GILBERT AVE. CINCINNATI, OHIO

In Canada—Safety Supply Company—Toronto

THERE'S SAFETY IN THESE NUMBERS

No. 31 Grinders and Chippers Goggles

No. 335 Welders Coverspec Goggles

"CHAMPION"

EYEGARDS

with 10 way ventilation

NEXT BEST THING TO YOUR EYES

Giving your men the finest in eye protection doesn't mean you have to pay premium prices. Get Eyegard goggles and save the difference! They're the goggles that provide greater comfort because the lightweight plastic frame is molded to form-fit the face . . . greater protection because the goggles are impact-resisting . . . greater ventilation through three large vents at side of cup and seven additional vents around the lenses. Cool and fog-free. With all their exclusive features, they cost no more than ordinary goggles. Get Eyegard "Champions" on next order.

Write for free catalog of Eyegard Equipment . . . it will save you money!

AMERICAN INDUSTRIAL SAFETY EQUIPMENT COMPANY

3501 LAKESIDE AVENUE CLEVELAND 14, OHIO

DIVISION OF THE BURDETT OXYGEN COMPANY • CLEVELAND, OHIO

nessee Coal, Iron and Railroad Company, Bessemer, Ala.

There was a record enrollment of 646 mines and quarries in the 1949 contest—more than triple the enrollment in the first competition in 1925.

The worktime at the 646 plants enrolled in the 1949 contest totaled more than 146 million manhours. Last year's injury-severity rate of 5.56 days lost per thousand man-hours of work was more favorable by a wide margin than in any other year since the competition began in 1925. It was 18 per cent better than the previous low record of 6.79, achieved in the 1948 contest. The injury-frequency rate was 33.21 per million manhours of competition, almost equaling the record low rate of 33.02, attained in the competition of 1940.

Members of the 1949 Committee of Award include: Ned H. Dearborn, president, National Safety Council; Julian D. Conover, secretary, American Mining Congress; William Green, president, American Federation of Labor; J. D. Battle, executive secretary, National Coal Association; A. T. Goldbeck, engineering director, National Crushed Stone Association; A. J. R. Curtis, assistant secretary and safety director, Portland Cement Association; and Dan Harrington, consulting engineer.

Housekeeping in the Bid

(From page 33)

struction project accidents can be attributed to poor housekeeping in the final analysis.

Public approval is wonderful when you have it but terrible when you lose it. Poor housekeeping has been the cause of losing public favor in many instances. Sometimes, too, poor housekeeping results in law suits that cost money.

Fires on construction jobs can cause serious hidden costs. While equipment, material, and buildings may be insured, work stoppage, cleaning up, and time lost on the schedule are not. Many fires might have been prevented by good housekeeping. Those which do occur result in loss of good will, poor public relations, low em-

ployee morale, and production time which means dollars and cents.

The real dividends to be earned through good housekeeping include better fire protection, better production, lower costs, better morale and industrial relations, large savings in compensation costs and better public relations.

Better fire protection can be accomplished by collecting and burning trash at designated points. Good planning makes it possible to keep flammable material segregated and enables buildings to be located to avoid mass conflagration.

Good public relations can be built up by protecting the public at a job site. Adequate barricades, signs, guards and other precautions should be taken to protect passersby and "sidewalk superintendents."

On every job, the housekeeping program should start before ground is broken. It should be well planned and carried out. Frequently in the past, housekeeping has been treated like a luxury which cannot be afforded. It is not a luxury; it is an essential which every contractor must practice.

Some "hard luck" jobs, which are possibly under-bid or improperly planned, end up with a poor and costly safety record. When a contract is pushed, both for time and money, housekeeping is neglected. If housekeeping is not treated with the same importance as concrete placement or moving dirt, losses and accidents undoubtedly will result. Planning can offset them.

A circus moves its entire equipment every few days to a strange city over strange routes. It could not survive if all its moves had not been planned and scheduled down to minutes. It could not maintain its equipment if it was not "sold" on good housekeeping. If good housekeeping can be part of the organizational plan of a circus, why shouldn't it be an integral part of any construction project?

When housekeeping is made part of a bid and properly carried out, it will pay real dividends for customers, employers, and employees.

Industrial Safety

From page 37)

tivities is presented in the report.

The appendices of Part I contain a monograph on international standardization of industrial accident statistics, a list of safety associations, institutions, and museums, and a list of safety magazines.

Part II of the report deals with legislation and presents a summary of legislation enacted in various countries covering certain aspects of industrial operation. The loss regulations analyzed are mainly concerned with safety, as distinct from the health, of workers. There is a brief summary of the varying scope of factory inspection and legislation in the different countries. Legislation in the 14 countries is covered in 43 chapters, each devoted to a specific operating hazard or type of equipment. The appendix contains an extensive bibliography classified according to subject.

Inevitably, in a work of this

IPCO HI-BOY SIGN

FOR STREET AND HIGHWAY USE

ALL METAL • NON-TILTING • HIGH VISIBILITY

Will not blow over, leaving your men and the public unprotected. Sign frame pivoted on each side allowing movement with varying wind and pressures and full vision at all times . . . Attractively and rigidly constructed; folds compactly for storing.

Write for Bulletin K-80

IPCO
Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2850 N. FOURTH STREET • PHILADELPHIA 33, PA.

SAFE-LINE WIRE ROPE CLAMP
Does Not Slip

FASTER—SAFER—
ELIMINATES SPLICING

Millions in daily use prove *Safe-Line* the right way to hold wire rope securely. It's the better way, too!

Better because *Safe-Lines* are faster than splicing and serving, or using U-bolts.

Better because *Safe-Lines* outpull the strongest rope, hold a tight thimble, minimize rope or sling breakage.

Better because *Safe-Lines* are easy to use and re-adjust, without special tools or skilled labor.

Better, too, because *Safe-Lines* enclose sharp wire ends, preventing personal injury and mental hazards.

Try this better way that saves you time and money.

Approved BY UNDERWRITERS' LABORATORIES AND CIVIL AERONAUTICS ADMINISTRATION

FORGED AND MASTER COINED TO FIT ROPE SIZES 1/16" TO 3/4"

Safe-Line double spiral splines fit each wire and strand, providing a powerful *grip, without cutting action to the rope. Replacement guarantee on clamp against breakage and fracture.*

WRITE FOR DESCRIPTIVE PRICE-LIST FOLDER

NATIONAL SAFE-LINE CLAMP CO.
11252 NINE MILE ROAD
VAN DYKE, MICHIGAN

ARE YOU USING . . .

"HIT OR MISS" Washroom Methods?

Sani-Dri

Electric HAND DRYERS

GIVE YOU

Cleaner Washrooms!

Save Towel and Maintenance Costs!

Modern washrooms today are equipped with faster-drying Sani-Dri that dries hands or face with a stream of hot air. No buying or stocking of towels . . . no unsanitary litter or waste containers . . . no fire hazard . . . no paper-clogged soil pipes . . . no servicing of empty towel cabinets. Instead, Sani-Dri provides cleaner, more sanitary washrooms with *automatic 24 hour drying service!* YOU SAVE UP TO 85% OF WASHROOM COSTS!

ONLY SANI-DRI HAS THIS RECORD OF PERFORMANCE!

Many Sani-driers installed 15, 20 and even 22 years ago are still giving efficient drying service. They are being used in every civilized country in every climatic condition. Sani-Driers have carried the Underwriter's Seal of Approval for over 18 years!

Write for Free Literature

Shows all Sani-Dri Electric Driers, including pedestal model that modernizes washrooms without structural changes and built-in wall model for new installations. Write today!

★

Distributors in Principal Cities

THE CHICAGO HARDWARE FOUNDRY CO.

"Dependable Since 1897"

1080 Commonwealth Avenue

NORTH CHICAGO, ILLINOIS

type requiring several years of preparation, some of the information will be out of date before the book is published, particularly in this rapidly changing world, following World War II. Nevertheless, this book contains an immense amount of practical information. It gives a very impressive picture of the world-wide scope of the safety movement and a field of vast opportunities for the creation of international good will and helpfulness.

Carman Fish

Vinyl Coatings

(From page 21)

ings contain alcohol type solvents such as:

Butyl alcohol—closed cup flash point 84° F., lower explosive limit 1.7 per cent.

Ethyl alcohol—closed cup flash point 55° F., lower explosive limit 3.28 per cent.

The range in this case is a low flash point of methyl ethyl ketone at 30° F., to butyl alcohol at 84° F., and a lower explosive limit range of 1.34 per cent to 3.28 per cent.

TABLE III
Maximum Allowable Concentrations for Common Solvents (Manual of Industrial Hygiene)

Amyl Acetate	400 p.p.m.
Benzene (Benzol)	100 p.p.m.
Butyl Acetate	400 p.p.m.
Butyl Alcohol	200 p.p.m.
Gasoline (Petroleum)	1000 p.p.m.
Methyl Alcohol	200 p.p.m.
Petroleum Naphthas	1000 p.p.m.
Toluene (Toluol)	200 p.p.m.
Turpentine	200 p.p.m.
Xylene (Xylol)	200 p.p.m.

From this analysis it can be seen the older type paints, varnishes, and enamels, and the so-called newer synthetic resin coatings actually have the same range as to flash point. It is also well to take into consideration the explosive limits which are considered as per cent by volume of vapor in air. This point is extremely important since application by spray may allow solvent concentrations, under improper conditions, to rise above these lower explosive limits.

If the solvent vapor in air does not reach the lower explosive limit, no explosion can possibly occur. Therefore, the higher the lower explosive limit the safer working conditions become. On this point alone, synthetic materials may be said to be safer than the more conventional coatings since, in general, the lower explosive limit for synthetic materials is higher than that for the older paints and varnishes.

Point 2. The statement that vinyl coatings are a greater fire hazard than old paint type coatings and are more so because the dried vinylite paints have additional characteristics of burning until completely consumed, is incorrect. Naturally, with a *wet* paint film on the surface there is danger of fire burning the wet coating, since oils and solvents are flammable. It is well known in the trade and fully reported in technical publications by the manufacturers of vinyl resins, that vinyl films will not support combustion.

In the publication *Technical Data on Plastics* by the Plastic Materials Manufacturers Association, Inc., on page 68 under "Vinyl Chloride Polymer and Copolymer

CUT CLEANING COSTS IN HALF!

WITH Oakite Steam-Detergent Cleaning you hit dirt three ways at once. With heat! With force! With steam-saturated detergent. That is how you cut cleaning time in half!

If you have your own steam supply, all you need is the Oakite Solution-Lifting Gun, a couple of lengths of hose and a small container. No pumps, no motors, no expensive set-up.

Interesting bulletin tells how you can save money on your cleaning and paint-stripping operations. Send for FREE Copy.

OAKITE PRODUCTS, INC.
140 Thames Street, NEW YORK 6, N. Y.
Technical Service Representatives Located in Principal Cities of United States and Canada

OAKITE

SPECIALIZED INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

Plastics," a detailed chart indicates that both rigid and nonrigid films made from these materials are self-extinguishing. Page 76 under "Vinylidene Chloride Plastics" indicates that these materials, as filaments, molding and extrusion compounds, and the films are self-extinguishing.

In *Modern Plastics Encyclopedia* the charts of plastic properties show a burning rate for rigid vinyl chloride acetate resins as "nil," vinyl chloride resins, plasticized, as slow to self-extinguishing, and vinylidene chloride resins as self-extinguishing. It is well know that the vinyl chloride copolymers and vinylidene chloride polymers were used during the War as the resins to flameproof canvas for the Armed Forces.

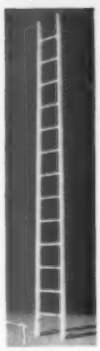
Table II shows results of a test made at the Philadelphia Naval Shipyard Industrial Laboratory on three different vinyl coatings compared with the U. S. Navy Fire Retardant Paint 52-P-22.

The test was conducted with the Industrial Test Laboratory's thermoelectric fire-retardant paint testing machine operated with 300 amperes current and open circuit voltage of 78 volts. The duration of the cycle for the test was 30 seconds. During this cycle the narrow neck of the coated panel was heated to a cherry red in approximately 12 seconds. If a flame developed at either end of the neck in the middle of the panel, or a flame developed along the length of the neck, the coating was considered to have failed the fire retardant test. The paint on the neck of the panel is completely charred.

One of these vinyl coatings was formulated especially for fire resistance; that is, this coating is recommended for use over flammable materials to reduce the burning rate. The two other vinyl coatings were standard materials not specially formulated for complete fire resistance. This test demonstrates the fact that vinyl resin coatings are fire resistant and are comparable to coatings specially formulated for that purpose, such as Paint 52-P-22.

Point 3. "The solvents used in vinyl paints have anesthetic and toxic properties."

Here again it is well known that



Gold Medal Single Ladder
Rung Braces. Tie Rods. Sizes 8' to 24'. Approved by Underwriters' Laboratories, Inc.

Costly
HELP ELIMINATE ACCIDENTS
with these
Safer LADDERS

When you buy ladders, put safety first. It's good business to insist on "Gold Medal" equipment. That's a practical way to cut your accident rate. For nearly three quarters of a century, Gold Medal Ladders have proved their superiority on every type of job.

Gold Medal Ladders are designed and skillfully built for lasting service. But safety is the first consideration. *You can depend on Gold Medal equipment!* Conform to A.S.A. Ladder Code.

Write today for New Gold Medal Ladder Catalog L-71

Gold Medal Extension Ladders
A high-quality ladder. Sizes: 16' to 52'. Approved by Underwriters' Laboratories, Inc.

Manufacturers of:

GOLD MEDAL Tubelox Steel Scaffolding — Safety Scaffolding Machines — Junior Safety Swinging Scaffolds—Steel Sidewalk Bridges —Single, Extension and Platform Ladders • "TROUBLE SAVER" Sectional Steel Scaffolding—Adjustable Steel Trestles—Steel Scaffold Brackets.

Gold Medal Platform Ladders
Provide wide working platform with tool rack at top, rung back, knee-braced steps and truss-rodded. Sizes: 4' to 18' (height of platform). Approved by Underwriters' Laboratories, Inc.

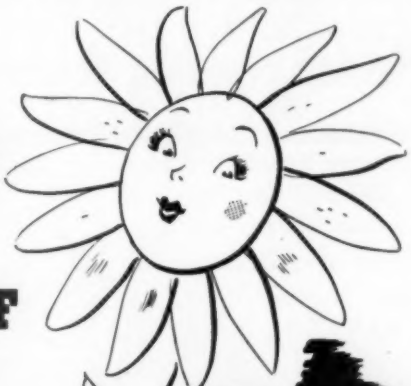
GOLD MEDAL LADDERS SCAFFOLDING

For Greater Safety . . . Efficiency . . . Economy

THE PATENT SCAFFOLDING CO., Inc.

Dept. No. NSN, 38-21 12th Street • Long Island City 1, New York
BRANCH OFFICES: Atlanta • Boston • Chicago • Cleveland • Dallas • Detroit • Kansas City, Mo. Los Angeles • Miami • Milwaukee • Philadelphia • Pittsburgh • San Francisco • Seattle • St. Louis

Be fresh... stay fresh



wear Cover's
FOG-PROOF GOGGLES

Famous "Nod & Shake" Type

Used by thousands, for years, to protect eyes against gases, dusts, fumes, smoke, paint spray. Can be worn with any make respirator. Frames are of soft, pliable rubber that give air-tight fit on any shape face. A few drops of water placed in patented groove keeps fog from forming on inside of single lenses. An easy nod and shake of the head keeps lenses clear indefinitely.

Sample sent $1.65 pp

H. S. COVER, South Bend, Ind.

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY | *Established* 1914

Manufacturers of Self-Sticking Tape Products

CHIPPEWA FALLS 2, WIS. *Distributors in 125 Cities*

NOW...Links of VINYL PLASTIC bring You a Better FLOOR MAT

- Greater Resistance to Gas, Oil and Grease
- Longer Wearing Life
- Distinctive Beauty

With Utmost SAFETY—

Here's the New Vinyl Link Mat that meets unlimited service applications.

KEEPS ITS NEW LOOK...

These Vinyl links outwear ordinary rubber links many times . . . Color stays clear and bright . . . They resist soil absorption, keeping their clean look longer. They are firm and resilient, giving continuous slip-proof SAFETY. They resist oil, gasoline and grease — won't soften or damp rot. Assembly of colored links permits optional designs in red, brown, green, white and black.

Trade Mark Registered **MELFLEX**

IN STANDARD COMBINATION OF COLORS and SIZES — Or Made To Your Specifications —

Standard pattern shown above: Black with red link border and center in 17" x 25", 18" x 30", 24" x 36", 30" x 48" . . . Made also to your requirements in size and color design . . Write today for full story and prices.

MELFLEX PRODUCTS COMPANY, Inc.

L. E. WARFORD, President

410 S. Broadway, Akron 8, Ohio In Canada: P. O. Box 411, Fort William, Ont.

solvents of all types of paints, varnishes, lacquers, and synthetic resin coatings should not be breathed for long periods of time. The solvents used in new synthetic resin coatings such as the vinyls, however, are no more toxic nor anesthetic than those used in the older type paints, varnishes, and enamels.

Table III gives a list of solvents taken from the *Manual of Industrial Hygiene* issued by the U. S. Public Health Service, showing maximum allowable concentrations of the various solvents based on an eight hour daily exposure.

The materials which are most toxic and should be guarded against are the aromatic type solvents such as toluene, xylene, and turpentine, which show a 200 parts per million allowable concentration. Butyl alcohol, used in wash prime systems, is rated in the same class. Amyl acetate and butyl acetate show a 400 parts per million allowable concentration.

Ketone solvents used in the vinyl resin coatings are not shown in this list. However, from other sources it has been found that these solvents, which are the main ones used in vinyl coatings, are considerably less toxic than those shown here.

On page 245 under "Spray Painting" in the *Manual of Industrial Hygiene* it is stated that "the toxicity of solvents varies from highly toxic benzene to the relatively non-toxic acetone," which is the lowest of the ketones.

The ketone solvents used in the vinyl coatings are rated as warning solvents. They are warning at a considerably smaller concentration than the lower explosive limit of the same materials. There is a characteristic odor from these solvents, and when the warning concentration is reached there is mild irritation of the eyes and mucous membrane. There is a definite tendency, therefore, for workmen to get away from the area before the solvent concentration becomes too high. This is not true of paints and varnishes where those materials are definitely less warning.

From the information presented it can be seen that where proper

care is used in the application of vinyl resins, they are no more hazardous than the products previously used on industrial installation or aboard ship.

Following are a few simple rules to be observed for the handling of vinyl or other synthetic resin coatings in enclosed areas. These rules are good practice for the installation in enclosed areas of any coating where flammable solvents are a factor.

1. First and most important is ventilation. This ties directly to the lower explosive limit of solvents used in coatings, since if the solvent concentration does not reach the lower explosive limit there can be no explosion. The concentration can be kept far below the lower explosive limit by proper ventilation. This is true irrespective of the flash point, since the flash point merely represents the temperature at which the particular solvent will evaporate sufficiently rapidly to reach the lower explosive limit.

Spraying is the painting method most generally used for the application of synthetic resin coatings. Under these application conditions temperature ceases to be so much of a factor, since even a very slowly evaporating solvent such as diesel oil or fuel oil can be dispersed in the air by spraying, so that the explosive limit is easily reached other than by evaporation alone.

As a matter of fact, explosive limits should not be limited to solvents, since dusts of many kinds dispersed in air create serious explosive hazards. Ventilation and the maintaining of the solvent percentage by volume in air at a minimum concentration is, therefore, the most important factor in eliminating the explosive hazard.

To give a comparatively easy method of figuring possible solvent concentration in air, it is calculated that if it were completely vaporized, there would be obtained 25 cubic feet of solvent vapor for every gallon of coating sprayed. From this figure it can be calculated the number of cubic feet of solvent sprayed into a tank per hour. Taking this figure in relation to the cubic volume of a tank or area in which the coating is applied, the amount of ventilation re-

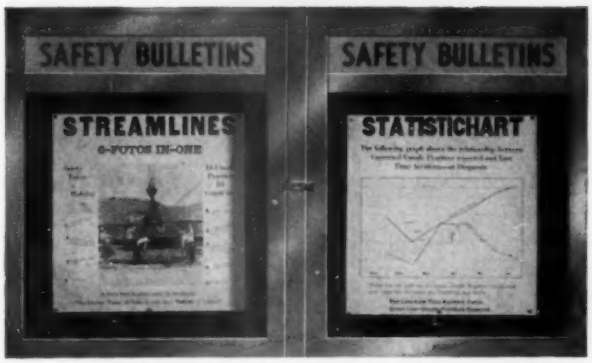
No. 5621
FIRM-GRIP
No. 5615
SMOOTH
LENGTH:
14 inches
GAUGE:
.045-.055
COLOR:
Brown
SIZES:
10-11-12

The outstanding value and hand safety specification throughout industry. Heavy gauge, steam-cured, high age-resistance and exceptional durability with extra heavy reinforcement at points of wear. Long and short gauntlets in heavy and lighter gauge styles with all-over smooth surface also available in genuine neoprene latex.

*Request sample and quotations.

SEIBERLING LATEX
PRODUCTS COMPANY
AKRON 9, OHIO

PROTECT · DISPLAY
· ILLUMINATE ·
your safety messages



The sturdy, all-metal, weatherproof construction of Diamond Bulletin Boards protects your messages from the weather. Illumination attracts employees' attention, makes reading easy. Install Diamond Bulletin Boards indoors and out. Write for complete information and prices. Safety First Supply Company, 425 Magee Street, Pittsburgh 19, Pa.

Double Unit, All-Metal, Illuminated
DIAMOND BULLETIN BOARDS

quired can easily be calculated.

In our work with vinyl coatings we use the figure of 1 per cent as the maximum solvent concentration allowable, and from this have calculated the size blower required for various sizes of tanks. Ventilation must be maintained during the entire time of application and drying to make certain the lower explosive limit is never reached.

2. It will be noted in the list of properties of solvents, the density of solvent vapor was given compared to air. In all cases you will find the solvent vapors were heavier than air, therefore, would have a tendency to concentrate in the lower portions of a tank or closed structure. It is normal practice, therefore, that the suction blowers be operated in such a way that not only is the turnover of air sufficient to maintain minimum solvent concentration, but operated in such a way to prevent pockets of solvent vapor being concentrated in the lower portions of enclosed spaces. This can ordinarily be accomplished by sucking the air with suction blowers from the bottom of the tank so the circulation of the air is from the top manholes or openings down through the tank and up through the blowers and away from the application area.

3. The third point to be observed is the use of spark-proof and explosion-proof equipment for application of the coating. Electrical equipment and lights shall be explosion proof, tools and shoes shall be spark proof. The use of such equipment has been common practice in the application of synthetic coatings for a number of years.

4. All smoking, matches, fire, flames, or torches should be prohibited within 50 feet of the area where coatings are being applied.

5. All men working in enclosed areas should wear compressed air type masks which supply them with a flow of clean air at all times. The mask found most successful in our operation is the DeVilbiss MPH compressed air mask. It is light, does not tend to "fog" up with perspiration, and is not in tight contact with the skin of the face. It has been found this mask can be used several hours while spraying in the interior of a tank without discomfort.

In summary, procedures to insure safe application of volatile and flammable materials in enclosed areas are:

1. Adequate ventilation to maintain the solvent concentration in the air below 1 per cent by volume.
2. Circulation of air to all portions of tank.
3. Prohibition of smoking, matches, and flame within 50 feet of application.
4. Use of explosion-proof and spark-proof equipment.
5. Adequate compressed air masks for workmen in enclosed areas.

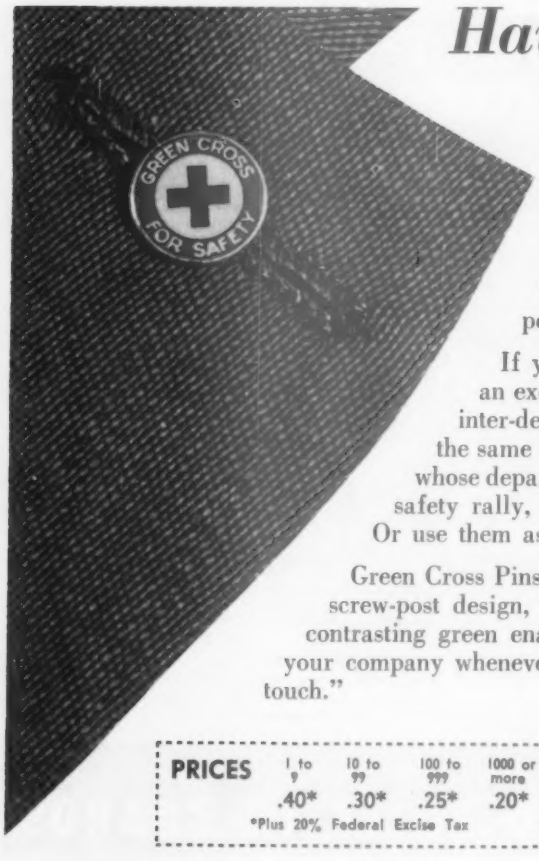
REFERENCES

Vinyl Chloride Polymer and Copolymer Plastics: Technical Data on Plastics, May, 1948, Plastic Materials Manufacturers Association, Inc.

Modern Plastics Encyclopedia, 1949.

Manual of Industrial Hygiene, 1944, Division of Industrial Hygiene, National Institute of Health, U. S. Public Health Service.

Acute Response of Guinea Pigs and Rats to Inhalation of Vapors of Isophorone, By Henry F. Smith, Jr., and Jane Seaton, Mellon Institute, Pittsburgh, Pa. Journal of Industrial Hygiene and Toxicology Vol. 22, No. 10, Pages 477-483, December, 1940.



Have you explored the possibilities of this

GREEN CROSS PIN?

Here's a pin you can use in a dozen different ways, depending upon your own particular needs and imagination.

If you have a safety committee, the Green Cross Pin makes an excellent committee member identification badge. If you run inter-departmental safety contests, Green Cross Pins can be used in the same way as a traveling trophy—they go each month to the men whose department has the best safety record. If you're staging a special safety rally, dress up the occasion by pasisng out Green Cross Pins. Or use them as favors when you're having a safety dinner.

Green Cross Pins are satin-finished, silver-plated lapel pins of the popular screw-post design, 3/8" in diameter, featuring the Green Cross emblem in contrasting green enamel. They're distinctive and inexpensive. Use them in your company whenever you have a situation or occasion that rates a "special touch."

PRICES	1 to 9	10 to 99	100 to 999	1000 or more
	.40*	.30*	.25*	.20*

*Plus 20% Federal Excise Tax

NATIONAL SAFETY COUNCIL
425 NORTH MICHIGAN AVENUE
CHICAGO 11, ILLINOIS

NEW SAFETY EQUIPMENT FOR INDUSTRY

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Respirator

American Optical Co., Southbridge, Mass., announces that their new twin cartridge respirator R-5055, providing protection against low concentrations of organic vapors and all dusts, has received Bureau of Mines approval BM-2305. It is not necessary now for people exposed to both types of atmospheric contaminants to change respirators, the company points out. In addition, other cartridges for use with this face piece protect against acid gases, combined acid and organic gases, ammonia and metal fumes.

The cartridges are uniformly packed under electrical control and are supplied in balanced pairs. Users may switch cartridges for different uses instead of having to purchase several types of respirators. The R-5055 respirator, featuring twin cartridges containing especially activates sorption material and new chemically treated felt, has also been tested and found satisfactory by the U. S. Department of Agriculture for respiratory protection against low concentrations of parathion.

Audible Alarm

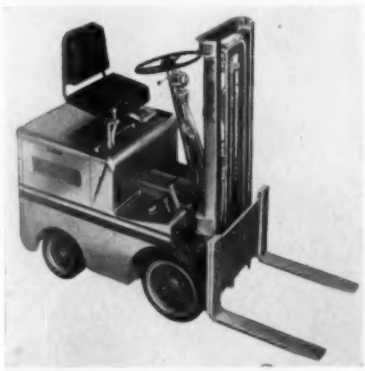
The McDonald Reversalarm features a warning system to alert unsuspecting victims in the path of backing trucks. The alarm system mounts on any truck chassis near the rear of the vehicle. Employing a single stroke, low current, weatherproof gong, the alarm gives a sharp warning within the first 8 inches of the truck's backward motion. The alarm is sufficient in volume to give adequate protection under all conditions and operates automatically with or without the truck's motor running.

Emphasizing simplicity of design, it uses a special automatic interrupter switch that connects on the transmission speedometer cable take-off. It can be quickly installed for operation on either a 6 or 12-V system. Full information is available from B. F. McDonald Co., 5112 S. Hoover St., Los Angeles 37, Calif.

Fork Truck

The new electric battery-powered "Truc-loader," 1,000-pound fork-lift truck announced by Clark Equipment Co., Battle Creek, Mich., has the following features:

Automatically accelerated control as standard equipment, power controlled through a master switch in turn controlled by an automatic timer, to provide even acceleration of motor speed. Control is non-plugging type; direction of travel cannot be changed until motor comes to full stop. "Dead man" brake operated off the drive shaft of the drive motor, sets automatically whenever the driver's seat is vacated. The directional control lever locks in neutral automatically when the driver leaves his seat. Increased load capacity with 24 inch load-center rating. Thirty per cent higher speed. Maximum accessibility for easy service and maintenance.



Another improvement claimed for the machine is the use of a separate motor to provide power for the hydraulic pump, resulting in an 80 per cent increase in lifting and tilting speeds. The lift-control lever is of new design to permit ready identification and to operate in the same direction as the action desired—pull straight up to raise the forks, push down to lower the forks.

Lift heights are available in a range from the standard of 84 inches, with over-all height of 61 inches, to 130 inches and an over-all height of 84 inches. Steering mechanism is of new design for use with the pivoted type steering axle.

Protective Cream

The Milburn Co., 3245 E. Woodbridge St., Detroit 7, Mich., announce their new Ply No. 8, a cream which can be applied to all exposed skin areas as a protection against high radiant heat. The cream reflects the radiant heat and in so doing leaves the workman without the hot sensation during exposure and the dry skin or burns which result after exposure. The cream is water soluble and is removed in the normal washing and cleanup. Uses for the cream are in foundries, steel mills, glass plants, heat treating departments or other plants which use high heat.

Explosive Gas Detector

A new lightweight, portable instrument for detecting explosive gases, called the Probetector, has been placed on the market by Atlas Exploration Co., 1911 W. Alabama, Houston, Tex. It is designed to give an immediate reading of gas concentration, is calibrated for the lower explosive limit of combustible gases in the atmosphere wherever it is placed, and is adaptable for general use in industry in the chemical, and refining industries where explosive gases might collect, in mines, along pipe lines, in manholes, and in similar locations where any explosive gases might be found.

Readings are continuous and instantaneous. The outside case of the instrument is rustproofed and of durable metal; parts are of anodized aluminum, and battery and other working parts are enclosed so that they are weather tight and dust free. The detector is easily operated. The instrument dial is calibrated for the lower explosive limit of methane gas (a 100 reading meaning an explosive mixture); however, calibrations for any other explosive gas are available for any requirement.

Size of the instrument is 3¼" x 4¼" x 8"; and total weight is less than 8 lbs. The plastic instrument panel contains all the necessary devices for operation, including zero balance, dial, and automatic shut-off switch. The electrical indicating instrument, battery, battery switch, and associated electrical circuit are self-contained in a dustproof and moistureproof case.

Protective Garments

Development of a line of all plastic cloth protective garments is announced by The Milburn Co., 3245 E. Woodbridge, Detroit 7, Mich. The new garments are light in weight, only 5½ ounces per yard, and are cool and comfortable.

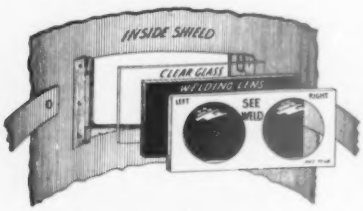
Two types of cloth are available. One is a plastic thread tightly woven into a cloth which looks and feels like silk. This material is ideal for fumes, exposure to acids, caustics, solvents, and oil. The second cloth uses the same base as the first but is then lightly coated with a clear vinyl plastic. It is slightly heavier for use where actual contact with oils, acids, caustics, or petroleum solvents requires maximum protection. Both are non-flammable.

NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

Magnifying Lenses

The Buell W. Nutt Co., 2225 S. Hoover St., Los Angeles, Calif. is marketing magnifying lenses for use in welding helmets. The lens, know as "See-Weld," is a plastic plate in which has been inserted ground and polished optical lenses of different focal or magnifying powers, which is to be inserted in welding helmets or hand shields to provide better vision for welders. Welders who wear spectacles with bi-focal lenses often have difficulty in properly seeing their work, due to the fact that to use the reading part of their spectacles the head must be tipped back so far that welding is difficult. The lenses in the plates augment the distance part of the spectacle lenses to make them equal to the reading or close work part of the lenses and enables the welder to hold his head in a normal position while welding.



These lenses may also be used in conjunction with spectacles which provide only for distance correction and where it is desirable to provide the addition of near point vision. To provide for varying visual requirements these lenses are regularly supplied in six focal or magnifying powers, from which a selection may be made to secure proper vision. These range from A, the weakest, to F, the strongest.

Fire Retardant

Flamort Chemical Co., 746 Natoma St., San Francisco 3, Calif., announces the development of a new chemical fire retardant known as Flamort which consists of patented dry compounds. Mixed with water, they are sprayed on unpainted wood, fabrics or other combustible materials to make them flame-resistant. The heat of the fire liberates non-irritating, non-toxic gases which dilute and cool the products of combustion to below their spontaneous ignition point. At the same time a glaze and char like coating forms at the area contacted by the flame. Thus the material which has been impregnated, repels flame. Due to this double action and nature of the fire retardant the tendency to smoulder is eliminated.

In the case of exterior spray treatment, surfaces, if continuously left open to the weather, may leach out in time, but a coating of exterior paint over the sprayed surface will protect it indefinitely. Roof shingles will take an oil stain after penetration, but surfaces already painted should not be treated. For this reason many lumber mills are now treating the raw lumber by immersion into a Flamort bath so that houses, barns and other buildings are fireproofed even before construction. Flamort WC has been tested and listed by Underwriters' Laboratories for use on lumber and cellulose board.

Ladder Shoe

A new type of ladder shoe known as "Sta-Put" has been designed by E. C. Forsythe & Co., 731 Hampton Ave., Schenectady, N. Y. It is non-slip made of corded rubber material on which is cemented an abrasive. It is long wearing, oil and water resistant material. The shoe fits on all size ladders and requires no drilling of the ladder rail and no bolting or inserting of screws to fasten the shoes to the ladder. A strong rubber strap binds the shoe in place after it is put in place by stretching the strap. This permits easy removal.

By placing a strip of this material on the top of the ladder it serves as a grip against the wall or face against which the ladder rests, thus preventing side movement of the ladder. Neoprene rubber can be supplied at small additional charge if the shoes are to be used in oil and acids. The shoes are interchangeable for ladder top and bottom.

Safety Designed Cups

Dixie Cup Co., Easton, Pa., announces that its 7-ounce cold drink vending dixies are now available in a new series of safety designs. The vending series comprise five different designs nested in consecutive order and covers a wide variety of safety problems occurring at work, in the home, and on the highway.

Woven Wire Slings

The Cambridge Wire Cloth Co., Cambridge, Md., has announced that its line of woven wire slings has been expanded to meet wider user demand. The slings are now available in standard widths of 3" to 30" and from 36" to 132" standard lengths. Other sizes supplied on special order.

The woven wire slings are constructed from an adaptation of a basic mesh used in the fabrication of Cambridge woven wire conveyor belts. They are available in any metal or alloy, including stainless steel. The manufacturer states these slings have been successfully tested and are in use for handling of heat exchanger tube bundles, rod and bar stock, and pipe and cylindrical tanks. Special tempered steel handles, attached to both ends of the sling, permit use of either a choke or basket hitch around the material being handled.

Extinguishing System

American-LaFrance-Foamite Corp., Elmira, N. Y. announces a new carbon dioxide fire extinguisher system for Class B and C risks and for Class A risks in closed vaults or other similar storage type rooms. It is adaptable also for the fire protection of Diesel locomotives.

Additional cylinders may be added at any time. The release system may be automatic or manual, or both. It is easily installed and functions with comparatively few parts. Flexible connections between

NEW SAFETY EQUIPMENT FOR INDUSTRY

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

the cylinders facilitate installing, weighing or removing cylinders for recharging or replacement.

Cleaning Solution

A new cleaning solution for personal safety equipment such as goggles, respirators and helmets is announced by American Optical Co., Southbridge, Mass. Combining the best properties of both a germicide and detergent, the No. 101 Germicidal Detergent removes dirt and deposited skin oils without inducing corrosion, staining or deterioration of rubber, plastic or metal parts. The solution may be used as a spray, swabbing or immersion solution.

Odorless, the solution acts as a deodorant in certain cases. The fluid is effective in hot or cold water, although increased temperatures will tend to aid its effectiveness and reduce cleansing time. Available in gallon containers or 2 oz. bottles packed 10 to a carton, a gallon of the solution makes 64 gallons of cleanser.

Sound Level Meter

Indoor and outdoor acoustics, machinery noise, and hearing requirements can be quickly and accurately measured with the pocket-size sound level meter developed by Herman Hosmer Scott, Inc., 385 Putnam Ave., Cambridge 39, Mass. Its flashlight size and simple controls allow operation by non-technical personnel. Sub-miniature tubes and hearing-aid batteries permit a rugged compact design meeting all specifications of the American Standards Association for sound level meters.

This Type 410-A, weighing slightly over 2 lbs., covers the range from 34 to 140 db above the standard ASA weighting characteristics which duplicate the ear response at various loudness levels. Batteries have a normal operating life of 50 hours. Optional accessories include carrying case, extension cable with input adaptor, and mounting tripod. Vibration pickups and integrators are available for measurement of displacements, velocities, and accelerations in the audio frequency range.

Lead Dust Respirator

Pulmosan Safety Equipment Corp., 644 Pacific St., Brooklyn 17, N. Y., announces their newly designed No. L-800 lead dust respirator which has been approved by the Bureau of Mines for lead dusts. The respirator may also be used for all known toxic dusts which are not significantly more toxic than lead. The respirator features lightness and compactness, using single chemically treated felt filter, 3-1/16"

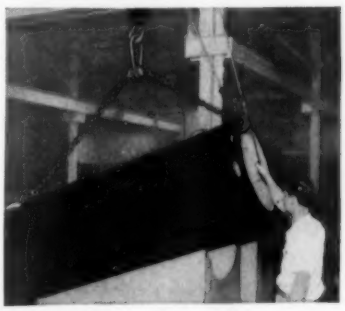
in diameter, providing low breathing resistance and low replacement cost. The new, patented exhaust valve is compact in size and positive in action. All metal parts are made of aluminum, permitting face piece to be bent inward or outward to fit any facial contour. The respirator has double rayon elastic headbands, rubber face cushion and knitted cushion covers. It is easy to clean and service and all parts are replaceable.

Lens Coating

A preparation for coating safety lenses to make them more resistant to welding splatter and emery pitting is announced by Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. The preparation, known as Tuf-Cote, derives its effectiveness from its resilience, which cushions the impact of particles striking against lens surfaces and keeps them free from pits and scratches resulting from these and similar causes for a substantially longer period than is the case with untreated lenses. The process inolves the patented application of a crystal-clear solution. Both surfaces may be treated if desired. The coating produces no distortion, does not discolor or peel off and permits the same degree of vision as is afforded by untreated lenses. Lenses can be recoated indefinitely so long as their surfaces are undamaged.

Sling Chain Adjuster

American Chain Division, American Chain & Cable Co., Inc., York, Pa., announces a new idea in lifting loads—the Acco sling chain adjuster. This device permits the lifting of an object at any angle desired. By lifting the chain in the pocket wheel, one leg is made longer and the other leg shorter. The chain locks and the load cannot shift.



Unbalanced loads, or loads hard to handle can be safely transported using this adjustment, eliminating the necessity of twisting or spiking a leg of the chain to shorten it. The adjuster is available only in complete units of pear-shaped link, adjuster and sling chain with hooks on both ends.

Gas Detector

Pagel, Horton & Co., Inc., 347 Madison Ave., New York 17, sales agents for Lor-Ann Instrument Co., Inc., announce the Lor-Ann Combustible Gas Detector and Automatic Safety Control for use when combustible gases or solvents are used in industrial processes. The detector will not only tell when a hazardous condition is approaching, caused by leaking gas or vapors, but also operates such equipment as fans, valves, etc., to eliminate any danger. It will also signal when the instrument itself is not working properly.

The dial on the instrument panel registers the air-vapor ratio at all times. Should the ratio approach the danger point, the needle records it, so that preventive measures may be taken. If unobserved, the instrument itself gives unmistakable warning, instantly operating all safety controls. In the event of trouble with the instrument itself, a warning bell reports this fact, as well as the proper trouble lights on the panel.

Gas is analyzed at the sampling point and the air-vapor ratio recorded electrically and instantly to the panel. The latter may be nearby or in a remote control room. Installation is flexible and may include one or more sampling points. Each installation is planned for the specific application, number of sampling points, types of gas, and

NEW SAFETY EQUIPMENT FOR INDUSTRY

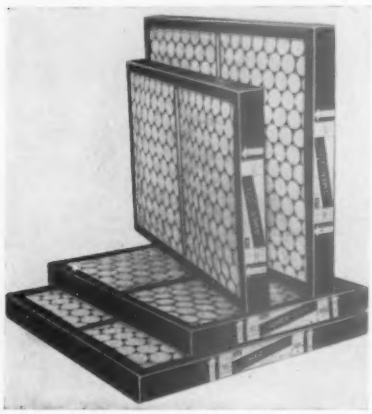
Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

adjusted for dust, moisture, or oil bearing atmosphere.

This instrument has been tested and listed by Underwriters' Laboratories and approved by Factory Mutual Laboratories.

Air Filter

A new replaceable type air filter, the AMER-glas, made in all standard sizes for forced air heating, ventilating and air conditioning systems, has been introduced by the American Air Filter Co., Inc., 125 Central Ave., Louisville, Ky.



The filtering medium consists of continuous strands of glass filaments held together at each point of contact by a high-temperature plastic bond to form a resilient pad. The pad is sprayed with an odorless and non-flammable adhesive and placed in a fiberboard casing between metal grills.

News Items

Chicago Eye Shield Co., 2300 Warren Blvd., Chicago, announces the appointment of Guardian Safety Equipment Co., Birmingham, distributors for the states of Alabama and Mississippi. Howard Freed, formerly with Williams & Co., will head up the new distributorship. Office and stocks will be maintained at 4215 First Avenue N., Birmingham.

* * * *

Joseph A. Klein, Jr., president of Mathias Klein & Sons, Chicago, died suddenly at his home in Wilmette, Ill., Wednesday, June 14. Mr. Klein was a grandson of the founder of the company, Mathias Klein, who started a forge shop in Chicago in 1855. In this shop Mathias Klein began to manufacture tools for the electrical industry, and from this start the company developed into a principal producer of tools and equipment for linemen and electricians.

On the death of Mathias Klein, his son, Joseph A. Klein, became president, and Joseph A. Klein, Jr., grandson of the founder, succeeded to the presidency on the death of his father in 1936.

Mathias A. Klein, brother of Joseph A. Klein, Jr., and also a grandson of the founder, will be the new president of the company.

* * * *

Selden T. Williams has been named president of A. Schrader's Son, Inc., 470 Vanderbilt Ave., Brooklyn 17, N. Y. He is vice-president of the Scovill Manufacturing Co. and general manager of the Schrader Division. Mr. Williams joined the Schrader Co. in 1929. He was formerly with the Victor Talking Machine Co.

* * * *

Gordon K. Cross has been named sales representative to sell in North Jersey by the Pyrene Manufacturing Co., fire extinguisher manufacturers of Newark, N. J. Mr. Cross was formerly sales manager for Slater Electric & Manufacturing Co. and prior to this he was field sales manager for the Bright Star Battery Co.

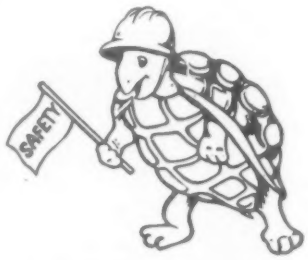
* * * *

McDonnell & Miller, Inc., manufacturers of boiler water level controls and other safety devices for steam and hot water boilers, has moved into a new building located at 3500 N. Spaulding Ave., Chicago 18. The firm's offices were previously located in the Wrigley Bldg., Chicago.

Turtle Club Formed

If a hard hat has saved your life, you are eligible for membership in the Turtle Club. The Turtle Club, which came into existence a little over a year ago in British Columbia, was formed to encourage the wearing of head protection among all workers exposed to falling objects. The hard-shelled animal was chosen as a symbol because it probably symbolizes self-protection more than any other living thing.

Patterned after the well-known Wise Owl Club for workers who have had eyes saved by wearing goggles, the Turtle Club is composed of men whose lives have been saved by wearing hard hats. The only requirement for active membership is proof in the form of a printed application, completed and signed by responsible people, that the applicant's life was definitely saved by wearing a hard hat. Those qualifying are presented with a lapel pin in the form of a turtle, similar to the accompanying drawing, and a scroll setting forth the history of their case. The club is not restricted to any group of workers, although most of the present members are members of the logging industry.



The constitution and by-laws of the Turtle Club were originally drawn up by Rusty Rustmeyer, safety director of the Canadian Forest Products Co., Ltd., and Ralph Fuller of Fleck Brothers, Ltd., Vancouver, B. C.

Truck Broadcasts Ball Games and Safety

The safety truck operated by Intelligence and Security Division, San Francisco Port of Embarkation, has been put to a unique use in broadcasting safety doctrine among members of the command.

The public address system installed on the truck is used to give play-by-play accounts of baseball games played by the San Francisco Port of Embarkation team in the Bay Area Armed Forces League. In between innings the announcer broadcasts safety advice and slogans.

The truck is used primarily for showing safety films to Port employes at their warehouses, piers and other work centers. Through an ingenious arrangement the projector operates from behind the screen and the image is shown at the rear of the truck.

TRADE PUBLICATIONS
in the Safety Field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.

1. **100,000 Vacuum Units:** A booklet pointing out advantages of "Invincible" Vacuum Cleaners, and user experience. Includes section on reclaimed materials through use of this unit. Invincible Vacuum Cleaner Mfg. Co.

2. **Rolling Doors:** Catalog containing full information on different types of doors that roll upward and out of the way. Illustrates steel-slat, fire, section-type, two-section, and steel bar and link doors. Describes space and time saving features. Kinnear Mfg. Co.

3. **Gas Masks:** Catalog describing different types of gas masks, and uses for which each is designed. Shows promotion of safety through use of gas masks in all types of industry. Contains selector table and complete information. Willson Products Co., Inc.

4. **Floors in Safe Hands:** Information compiled in booklet form describing how to care for floors, promoting safety through proper flooring knowledge. Booklet contains knowledge gained by years of research. Masury-Young Co.

5. **Dust Control in Your Plant:** Latest developments in dust control and blast cleaning. Shows how operating costs may be cut by proper dust control in many different industries, and how hazards may be eliminated. Also how some forms of dust may be reclaimed at a profit. Pangborn Corp.

6. **Anti-Skid Floors:** 8-page booklet containing information and data about rolled steel floor plating which promotes safety by reducing floor hazards. Illustrates how many different ways this type of flooring may be used. Alan Wood Steel Co.

7. **When Fire Strikes:** New 32-page booklet presents a survey of approved fire protection systems for making buildings fire-safe for human and material inhabitants. Also special hazards protection fully covered. Grinnell Co., Inc.

8. **Group Washroom Equipment:** Illustrated catalog includes helpful layout suggestions, along with other information about different types of washroom fountains and stall showers. Describes efficiency and convenience, economy, and ease of installation. Bradley Washfountain Co.

9. **Underfoot Safety:** Folder, well-illustrated, presents traction problems and tells how to solve them. Promotes safety through sure footing on wet, dry, or oily surfaces. Describes uses on many danger spots, plus ease of application. American Abrasive Metals.

10. **Linemen's Equipment:** A new bulletin giving full details on linemen's safety equipment, and proper way in which to use it. Describes full and complete line from which to choose. W. M. Bashlin Co.

11. **Engineered Chain:** Specifications for sling-chains are given in this chart, together with information on how to use them. Also includes chart for recording working data on chains used in your shop or plant. The McKay Co.

12. **Eye Safety:** Complete information in catalog form is presented on eye safety wear. Presents various types and sizes of goggles and glasses, together with information on where to use for best results. Chicago Eye Shield Co.

13. **Elements of the General Hospital:** Complete, 28-page catalog contains layouts as well as recommended equipment, for elements of the general hospital. Layouts approved by U. S. Public Health Service, supplemented by other layouts. Ohio Chemical & Surgical Equipment Co.

14. **Pivoted-Blade Shears:** A well-illustrated catalog giving details on pivoted-blade shears, and type of work each machine will do. Advantages set forth, with complete description of all safety features. Cleveland Crane & Engineering Co.

15. **Utility Hoist:** Illustrated bulletin giving general description and specifications, showing pictures, and suggesting uses for utility hoist. Provides answers to material handling problems. Unit Mfg. Co.

16. **Tubular Scaffolding:** Two-color catalog of 8 pages, carrying illustrations of complete line of tubular steel scaffolding and equipment. Included are drawings, specifications, also ladder-jacks, scaffold brackets, sidewalk bridges, and plasterers' scaffolding. Bil-Jax, Inc.

17. **Portable Fire Extinguishers:** Folder containing information on portable fire extinguishers for use in plants, home, trucks, and buses. Dry chemical type, chemical is unaffected by time or temperature. Approved by Underwriters' Laboratories. Safety First Co.

18. **Alloy Steel Chain:** New booklet containing information on alloy steel chains. Lists many different industries using alloy steel chains, and shows how comparison, experience, and costs proved superiority. S. G. Taylor Chain Co.

NATIONAL SAFETY NEWS AUGUST, 1950

425 N. MICHIGAN AVE.
CHICAGO 11, ILLINOIS

1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

10	11	12	13	14	15	16	17	18
☐	☐	☐	☐	☐	☐	☐	☐	☐

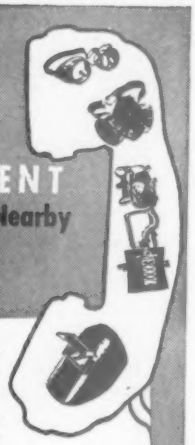
Please have sent to me the publication checked:

NAME..... TITLE.....

COMPANY.....

ADDRESS.....

CITY..... STATE.....



For SAFETY EQUIPMENT Phone Your Nearby Willson Distributor

For prompt service and friendly assistance on personal safety problems, call on your local distributor.

ALBUQUERQUE, N. MEX.—Hendrie & Bolthoff Co.
ATLANTA, GA.—Fulton Supply Co.
BALTIMORE, MD.—Carey Mach. & Sup. Co.
BIRMINGHAM, ALA.—Safety Engrg. & Supply Co.
BOSTON, MASS.—Cutter, Wood & Sanderson Co.
BUFFALO, N. Y.—American Allsafe Co.
BUTTE, MONT.—Montana Hardware Co.
CASPER, WYO.—Casper Supply Co.
CHARLESTON, S. C.—Cameron & Barkley Co.
CHARLESTON, W. VA.—Safety First Supply Co.
CHATTANOOGA, TENN.—C. D. Genter Co.
CHICAGO, ILL.—Protective Equipment, Inc.
CINCINNATI, OHIO—The E. A. Kinsey Co.
CLEVELAND, OHIO—Safety First Supply Co.
COLUMBUS, OHIO—The E. A. Kinsey Co.
DALLAS, TEXAS—Engineering Supply Co.
DAYTON, OHIO—The E. A. Kinsey Co.
DEADWOOD, S. DAK.—Hendrie & Bolthoff Co.
DENVER, COLO.—Hendrie & Bolthoff Co.
DETROIT, MICH.—The Chas. A. Strelinger Co.
EL PASO, TEX.—E. D. Bullard Co.
GRAND RAPIDS, MICH.—F. Raniville Co.
GREENSBORO, N. C.—Smith-Courtney Co.
GREENVILLE, S. C.—Carolina Sup. Co.
HICKORY, N. C.—Smith-Courtney Co.
HOUSTON, TEXAS—Allied Safety Equipment, Inc.
INDIANAPOLIS, IND.—The E. A. Kinsey Co.
JACKSONVILLE, FLA.—Cameron & Barkley Co.
KANSAS CITY, KANS.—L. R. Stone Supply Co.
LOS ANGELES, CALIF.—E. D. Bullard Co.
LOUISVILLE, KY.—Neill-LaVielle Supply Co., Inc.
MEMPHIS, TENN.—J. E. Dilworth Co.
MILWAUKEE, WIS.—Protective Equip., Inc.
MUSKEGON, MICH.—Factory Supply Co.
NEWBURGH, N. Y.—W. L. Smith Co.
NEW ORLEANS, LA.—Woodward, Wight & Co., Ltd.
NEW YORK, N. Y.—W. S. Wilson Corp.
OKLAHOMA CITY, OKLA.—Hart Industrial Supply Co.
OMAHA, NEBR.—Interstate Mach. & Sup. Co.
PHILADELPHIA, PA.—Industrial Prod. Co.
PITTSBURGH, PA.—Safety First Supply Co.
PORTLAND, ORE.—J. E. Haseltine & Co.
PROVIDENCE, R. I.—James E. Tierney
RICHMOND, VA.—Smith-Courtney Co.
ST. LOUIS, MO.—Sligo, Incorporated
ST. PAUL, MINN.—Farwell, Ozmun, Kirk & Co.
SALT LAKE CITY, UTAH—Industrial Supply Co., Inc.
SAN FRANCISCO, CALIF.—E. D. Bullard Co.
SANTA FE, N. MEX.—Hendrie & Bolthoff Co.
SAVANNAH, GA.—Cameron & Barkley Co.
SCRANTON, PA.—L. B. Potter Co.
SEATTLE, WASH.—J. E. Haseltine & Co.
SPOKANE, WASH.—J. E. Haseltine & Co.
SPRINGFIELD, MASS.—Charles C. Lewis Co.
SYRACUSE, N. Y.—Syracuse Supply Co.
TACOMA, WASH.—J. E. Haseltine & Co.
TAMPA, FLA.—Cameron & Barkley Co.
TOLEDO, OHIO—Safety First Supply Co.
TROY, N. Y.—The Troy Belting & Sup. Co.
TULSA, OKLA.—Krisman Industrial Supply Co.
VICKSBURG, MISS.—J. E. Dilworth Co.

CANADA

TORONTO—Safety Supply Company
MONTREAL—Safety Supply Company
WINDSOR—Safety Supply Company
KIRKLAND LAKE—Safety Supply Company
WINNIPEG—Safety Supply Company
EDMONTON—Safety Supply Company
VANCOUVER—Safety Supply Company
HALIFAX—Safety Supply Company

GOGGLES • RESPIRATORS • GAS MASKS • HELMETS

WILLSON DOUBLE

PRODUCTS INCORPORATED
READING, PA., U. S. A. Established 1870

Advertisers' Index

A

American Abrasive Metals Co. 83
American Chain & Cable Co., Inc. . . . 4-71
American Industrial Saf. Equip. Co. . . 86
American Optical Co. . . . . 76-B.C.
American Tel. & Tel. Co. 9

B

Bashlin, W. M., Co. 82
Bausch & Lomb Optical Co. 6
Behr-Manning Corp. 84
Blaw Knox Co. 53
Bradley Washfountain Co. 55
Brady, W. H., Co. 90
Buffalo Fire Appliance Corp. 47
Buhrke, R. H., Co. 74
Bullard, E. D., Co. 73

C

Chic Maid Hat Mfg. Co., Inc. 77
Chicago Eye Shield Co. . . . . I.B.C.
Chicago Hardware Foundry Co. 88
Columbus-McKinnon Chain Corp. 59
Consolidated Labs., Inc. 75
Coppus Engineering Corp. 5
Cover, H. S. 89
Cunningham, M. E., Co. 84

D

Davenport, A. C., & Son, Inc. 76
Dayton Safety Ladder Co. 86
Diversey Corp. 61
Dockson Corp. 85
Dracco Corporation 98

F

Finnell Systems, Inc. 41
Foam-X Company 51

H

Halperin, A. E., Co., Inc. 77
Harrington & King Perforating Co. . . . 77
Hood Rubber Co. 55
Hynson, Westcott & Dunning, Inc. . . . 43
Hy-Test Div., International Shoe Co. . . 16

I

Industrial Gloves Co. 64
Industrial Products Co. 83-87

J

Johnson Ladder Shoe Co. 78
Jones, C., Walker Co. 85

K

Kidde, Walter, & Co., Inc. 15
Klein, Mathias, & Sons 62

L

Lehigh Safety Shoe Co. 3

M

Macwhyte Company 7
McDonald, B. F., Co. 63
Melflex Products Co., Inc. 90
Mine Safety Appliances Co. . . . . I.F.C.

N

National Saf-Line Clamp Co. 87
National Safety Council . . 8-11-12-66-67-68-69-70-75-92

O

Oakite Products, Inc. 88
Onox, Inc. 82

P

Packwood, G. H., Mfg. Co. 14
Pangborn Corp. 49
Paramount Rubber Co. 80
Patent Scaffolding Co., Inc. 89
Pittsburgh Plate Glass Co. 65

R

Rose Mfg Co 78

S

Safety First Shoe Co. 79
Safety First Supply Co. 91
Seiberling Latex Products Co. 91
Speedi-Dri Corp. 48
Stonehouse Signs, Inc. 10

T

Triple Safety Heel Co. 80

U

Union Wire Rope Corp. 81
U. S. Steel Corp. 57
U. S. Treasury Dept. 45

W

Westinghouse Elec. Corp.—Sturtevant Division 13
Williams Jewelry & Mfg. Co. 81
Willson Products, Inc. 1-98

A Dust-Free Plant IS ALWAYS MORE EFFICIENT

Consult DRACCO ENGINEERS about DUST and FUME CONTROL

DRACCO CORPORATION
4043 E. 116th Street • Cleveland 5, Ohio

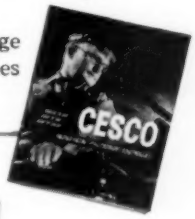
CESCO's Newest Safety Spectacle...

NOW AVAILABLE in 2 Eye Sizes...

42 x 45 mm and **45 x 48 mm**

LOOK at these exceptional features

- Recommended for eye safety where frontal protection is required and wherever non-metallic, non-sparking equipment must be used.
- Frames made of non-flammable, durable plastic.
- Attractive appearance—with all the smartness and styling of personal glasses.
- Really comfortable to wear—new, improved nose bridge provides considerably greater bearing surface, eliminating spot pressure on the nose. Goggle is light in weight; temples fit snugly yet gently over the ears.
- Correct fit—choice of narrow, medium or wide bridge widths. Flexible cable temples curved to hold spectacles in correct position at all times.



Be sure to have a copy of the latest CESCO Catalog!

For complete information about Cesco's newest safety spectacles, ask your Cesco distributor or write...

CHICAGO EYE SHIELD CO. • 2306 Warren Boulevard • Chicago 12, Illinois

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Los Angeles, Montreal, Philadelphia, Pittsburgh, Seattle, St. Louis, St. Paul, Toledo, Tulsa

AO Plastic Goggle

Here's an "8-Hour Day" Safety Goggle...

it's LIGHT, ATTRACTIVE, COMFORTABLE

For day-long wear—day in and day out—the AO607 Goggle combines light weight, good looks and comfort with its safety function. It can be worn directly over eyes or spectacles for frontal protection on machine or hand tool work, chemical and physical lab work, bottling operations, spot welding, light grinding, chipping, and riveting. Comes with handsome leatherette case. Your nearest AO Safety Products Representative can supply you.

QUICK FACTS

PLASTIC FRAME is light but durable. High set end pieces for unobstructed side vision. No metal touches skin. Face form frame gives extra protection, enhances appearance.

ACETATE LENS (clear or green) is large, one piece, shatter-resistant and easily replaceable. Provides exceptional vision in front and laterally. Broad bearing surfaces make nose pad unusually comfortable.

COMFORT CABLE TEMPLES have metal core for easy adjustment, snug fit. Enclosure in acetate prevents corrosion. Permanently sealed at tip and joint.

This goggle conforms to high safety and optical standards in every way.

American Optical COMPANY
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities